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EDITORIAL.

TWO TYPES OF HUMANITARIANISM.

Of late a struggle, which has been constant between two elements of society, has assumed quite definitely unpleasant proportions. This struggle rife with what is called *Argumentum ad hominum* and lowered at times to active mud-slinging, reminds one of the immortal dialogue between Fielding and Richardson, where the polite cognomens "beast" and "milk-sop" were interchanged; there being a modicum of truth on both sides, but at the same time, a complete and obstinate misunderstanding on the part of each contestant as to the other's motives and ends.

This ancient row, waged by two very different types of the human edition,—by those who believe in the practice of vivisection for the benefit of science, and those who hold that it should be stopped by law or at least controlled by legislation,—has recently waxed so fierce in England that the noise of battle has disturbed the peace and quiet of the rest of the world.

The almost irresistible tendency to attempt a settlement of this argument by calling a lot of names and making it so uncomfortable for our opponent that he withdraws, appeals very much to us. But we feel that we should consider such a mental fault with its hold on so many honest and good people, with greater seriousness; and at least present our views of the case, and set forth to some extent the ideas of the two parties engaged in combat.

First, then, let us consider the anti-vivisectionist. His confession of faith would read about as follows: *All pain inflicted on the lower animals by man is unwarranted and sinful, in that it does definite harm to the brute life in question, and at the same time degrades the human being: witness the fact that savage tribes, who enjoy animal suffering, have a corresponding lack of sensitiveness regarding human life and pain. The sacrifice of animal life and the production of pain and suffering among animals is not to be justified on the basis that humanity may be benefited thereby, for the sanctity of animal life should be held invio-*

late and protected from the ruthless and objectless inroads of the animal experimenter. Persons desiring to inflict pain and suffering on animals become callous thereby and are prone to look upon individuals who object to these cruelties as "sentimental fools and meddling idiots," thus evidencing their hopeless degradation and blind brutality.

These views, principally based on ignorance, are augmented by a certain testiness and objection to interference which has always characterized the scientific mind. Let us examine more closely into the various phases of this belief.

The argument is nothing new. Have not the Buddhists and the Hindus for ages respected the life of animals, believing the souls of all living creatures to have the power of transmigration, and to be either ascending or descending the scale? Do we not all feel a kindred feeling for that most misguided of sentimentalists, my uncle Toby, who, "has scarce the heart to retaliate upon a fly,—go, says my uncle *Toby,* one day at dinner, to an overgrown one which had buzzed about his nose and tormented him cruelly all dinner-time, and which after infinite attempts, he had caught at last, as it flew by him; I'll not hurt thee, says my uncle *Toby,* rising from his chair and going across the room with the fly in his hand; go, says he, lifting the sash and opening his hand as he spoke to let it escape: go, poor devil, get thee gone, why should I hurt thee? This world is surely wide enough for both thee and me." Do we not all feel a heart-twinge for the fox caught in a cruel trap and driven to the necessity of gnawing off a limb or of dying of starvation? Who among us does not realize the terrors and pain of the slaughter-pen, or the horror of the bird shot on the wing, or of the moose or elk pursued by the hunter and his dog, driven to an unequal battle and killed for the sport of the thing! But sport is a necessary and health-giving exercise and we must all have meat to eat and furs and feathers to wear.

To us, who are a little sentimental on our own account, the unnecessary slaughter of the forest birds and animals seems, beyond doubt, wicked and degrading; and the remarks of Professor Sedgwick strike a responsive cord in us, that until he became a biologist, he was an inexorable hunter, but after work in the laboratory and a better understanding of the animal sensorium, he never had the heart to stalk a deer.

The attack of the anti-vivisectionist seems to be directed against only one wave of the deluge of human cruelty that is about to submerge animal life and drown the finer sensibilities of mankind. The butcher may do his cruel slaughter of the innocents, the trapper and hunter may starve and maim the wild animals, the beautiful birds may be snared and shot for their plumage and the fish that look so pretty in the water, may be hooked out and allowed to die. These animals and their fate do not interest us for we must have all this delicious food and beautiful raiment.

But the scientist, working out his problem in the laboratory, is alone the reprehensible individual; he alone is accused of being guilty of taking delight in the simple act of killing, and of doing cruelties.

Another phase of this most interesting question is that concerning our right to sacrifice the life of plants. Suppose we are willing to become what Mr. Angell calls "Ethico-Religious Vegetarians" and confine our diets to other than animal food, must we not consider the life of the stately cabbage and the vital soul of the delicate bean? Have we a right to destroy these? A chemical diet, however, would seem on first sight to be unpleasant, and we fear would prove uneconomical.

The onward march of science is not to be checked by prejudice. This has often been tried, but history sparkles with the record of such resistance failing in its purpose. Prejudice and ignorance, which are responsible for so much of our trouble and misunderstanding, are still at work and have introduced into the anti-vivisectionist's mind a picture which only a little investigation and thought would forever dispel. The experimental laboratory is not a place inhabited by fiends who take delight in discovering the more sensitive nerves in an animal and in subjecting them to electrical stimulation, nor do the experimenters take pleasure in designing poisons that will cause delightfully interesting convulsions. It is a place, —— but we shall not insult our reader by rehearsing the necessity for animal experimentation, nor in extolling the great benefits to man, to animals and to plant life which have been discovered by this kind of study. And we also feel that scientific men and their methods stand out clearly enough in this world of doubt and darkness to need no defensive statements whatsoever.

What is in our mind to convey, is the thought that the lack of intelligence and information which makes of an individual an anti-vivisectionist is apt to induce him beyond the line of sentimental foolishness, into the ranks of the definite harmdoers; that is, to make of him a person striving for a wrong ideal at the expense of the rest of humanity. We wish we could convince him that the little humanitarianism he is fostering is directed against the true humanitarianism, against the good fight to defeat disease and old age and suffering and pain, not alone on the part of man, but among the animals and plants as well.

The plan adopted by the active members of this cult, is decidedly a vicious one; they appeal for legislation against the scientist, claiming that he is cruel, and that what he does is of no definite use. They make it necessary for the man who is giving his life to research designed to aid humanity, to go before our legislative bodies and defend himself on a charge that is both ignorant and wicked in its intent. In this respect the anti-vivisectionist is no sentimental fool; on the contrary he appears as an individual who would rather have his child die of diphtheria or

dysentery, rather have malaria or yellow fever himself, rather die of tuberculosis and infect others before his death, than to endure a reversal of his fixed idea regarding the experimental laboratory, the experimenter, and his work.

Let us not be too harsh with the anti-vivisectionists, but let us rather convince them that their efforts are misguided; that instead of striving for legislation against a few careful, painstaking scientists, who are thoroughly imbued with a nobler kind of humanitarianism, they had better encourage a general educational crusade against cruelty to wives, to children and to horses; and at the same time try to limit the destruction of our wild animals, killed for the sole satisfaction of the sportsmen.

THE PROGENY OF DERIDED MYSTICISM.

Not many decades back the Enclyopedia Britannica, in Vol. I, p. 459, gave utterance with its usual sonority to the following weighty and definitive statement: "Alchemy was, we may say, the sickly, but imaginative infancy through which modern chemistry had to pass before it attained its majority, or, in other words, became a positive science." Mysticism also got its share of abuse in the same authoritative work, the writer not for a moment supposing that the end of the nineteenth century would upset some of his most cherished and time honored theories.

That such an expression as the above should have been written by a critic of modern chemistry and accepted by the scientific world, is not surprising when we remember the attitude of the material philosophers of those times to any innovation that could have affected the fundamental ideas of all physical and chemical science. Self-satisfied and smug, the scientific world went wagging on, and the mere mention of the belief in the transmutability of one element into another; the transmission of thought through space; the influence of one mind over another; the idea of physical matter being rendered invisible at will, is treated with the persiflage which our scientists indulge in, especially when they wish to express contempt and scorn for a thing beneath their notice. And thus the tale ever runs: stiff-necked scientists, working quietly and sedulously on good conservative lines, unwilling to pay tribute to those researches of science that might topple over their principles of physics and chemistry!

In the face of what is happening to-day, the skepticism that seems never to desert us, is meeting a crushing adversary in the shape of many brilliant and remarkable discoveries. The props that have upheld the superstructures of chemistry and physics for years, and were thought to be adamant, are slowly crumbling away before the onset of radium, helium, the electrons or corpuscles of an atom, the radio-activity in the common air and soil, the advocacy of one prime element—in a word,

before the unintentional onslaught of the dogma of Paracelsus, and the teachings of alchemy and mysticism.

That there should be philosophers who are still unwilling to acknowledge our debt to alchemy and mysticism in pushing the world of thought ahead, should not surprise us, for to unseat Sir Humphrey Davy, who rejected as an impossibility the transmutability of one metal into another, and to put in his stead Paracelsus, would indeed be sacrilege. But the discoveries of Mme. Curie, of Prof. J. J. Thomson of Cambridge, and of Sir William Ramsey, ought to be convincing enough for such a little world as ours, that the former teachings of chemistry and physics are not invulnerable, and that the tenets of mysticism are, in reality, the vision of truth.

To show the onward march of mysticism we have but to mention Elie Metchnikoff's new book, "The Nature of Man." Here are embodied the latest ideas of the Russian bacteriologist regarding the prolongation of life. To Metchnikoff old age is abnormal, and no part of healthy physiological function; moreover, he asserts the time is not far distant when life will be prolonged indefinitely. This will depend on the victory resulting from the eternal fight between those vigilant policemen, the leucocytes, with the invading army, awfully arrayed, the bacteria. "If this be true," says Charles Kassel, in a recent article in the *Open Court*, "it needs but to learn the habits of these tiny pillagers of the frame, and to curb or neutralize their action, when the prophecy of Metchnikoff and the beautiful fancy of the ancient mysticists flowers into fact."

It would be well to remember that this book is not written by a dreamer of poetic fancies but by a man whose whole life has been devoted to the study of bacteriology. And yet, beneath the modern bacteriological dress of his theory, we see without any great difficulty, not the mere promptings of the alchemist's dream, but a scientific acceptance of alchemy's fundamental tenets.

Some day when the world is older and the things happening to-day are fully digested, a critic will arise among us who will tell the marvelous tale of the latter half of the nineteenth and the beginning of the twentieth century. The story will be greedily read, no doubt, for it will illustrate in how far the scientists erred in refusing to recognize the elements of derided mysticism as a force in shaping the newer phase of science. But the greatest lesson that will be flung to the world will be this, that the science of chemistry and physics is not a study that should lumber on from precedent to precedent, with only a slight change, now and then, but should be subject to great upheavals, even though these may come from sources that bear the hall-mark of a ragged reputation.

ETERNAL TRUTH OR EVERLASTING DOUBT?

The war between eternal truth and everlasting doubt is one that goes merrily on, despite the asseverations of the optimists that it has really come to an end, with Truth triumphant and Doubt defeated. No matter what the problem, no matter what the discovery, a phalanx armed cap-a-pie soon appears to sow dissensions in the ranks of the believers by preaching the tenets of the unconvinced. This has been done so often when a discovery that would be a boon to humanity is made, that the mere mention of the criticisms coming from the objectors must sound like supererogation; nevertheless, we are moved to an iteration of these criticisms, when a subject such as vaccination, which has passed its centenary of acceptance, is still liable to foolish and fatuous attacks.

In a recently published book, "Lady Mary Wortley Montagu and Her Times," by George Paston*, is shown how the intelligence of an extraordinary Englishwoman made possible the introduction of inoculation with smallpox in England as a preventive measure against the disease. Writing to Mrs. S. C., probably Sarah Chiswell, in a letter dated Adrianople, 1717, she says: "A propos of distempers, I am going to tell you a thing that I am sure will make you wish yourself here. The smallpox, so fatal, and so general among us, is here entirely harmless by the invention of ingrafting, which is the term they give it. There is a set of old women who make it their business to perform the operation every autumn, in the month of September, when the great heat is abated. People send to one another to know if any of their party has a mind to have the smallpox; they make parties for this purpose, and when they are met (commonly fifteen or sixteen together), the old woman comes with a nutshellful of the matter of the best sort of smallpox, and asks what veins you please to have opened. She immediately rips open that you offer her with a large needle (which gives you no more pain than a common scratch), and puts into the vein as much venom as can lie upon the head of her needle, and after binds up the little wound with a hollow bit of shell. * * * The children or young patients play together all the rest of the day, and are in perfect health till the eighth. Then the fever begins to seize them, and they keep their beds two days, very seldom three. They have rarely above twenty or thirty in their face, which never mark; and in eight days' time they are as well as before their illness. Where they are wounded there remain running sores during the distemper, which I don't doubt is a great relief to it. * * * There is no example of anyone who has died in it; and you may believe that I am well satisfied of the safety of the experiment, since I intend to try it on my dear little son. * * * I am patriot enough

* G. P. Putnam's Sons.

to take pains to bring this useful invention into fashion in England; and I should not fail to write to some of our doctors very particularly about it, if I knew any one of them that I thought had virtue enough to destroy such a considerable branch of their revenue for the good of mankind. Perhaps, if I live to return, I may, however, have courage to war with them."

Despite the hopefulness of her attitude, Lady Montagu certainly reckoned without her host, for no sooner had she promulgated her new theories in England than she became the butt of perhaps the bitterest attack ever leveled at a reformer. The medical profession rose en masse against her, predicting with blare of trumpets, the most appalling and disastrous consequences, and the clergy took the cue at once from the thin drippings that fell from the vituperative articles in medical journals and the daily press, to expatiate on the heinous offense of attempting to seize boldly events that rightly belonged to Providence. And following the daily instruction dealt out by the profession and the clergy, the common people hooted the unnatural mother who had risked the lives of her own children. Like all reformers, Lady Montagu's path was one of nettles instead of primroses. Disheartened, discouraged, she repented during the four or five years after her return to England, her humanitarian undertaking; and she repeatedly declared that had she foreseen the persecution that the new treatment would bring upon her, she would never have attempted to introduce it.

We of a later day are prone to be severely critical of our forbears when we read how ungraciously they behaved toward the person who gave them the means to eradicate a fearful disease. We glide with the greatest ease into the role of Supercilious Critic, forgetful all along that by merely stretching out our hand, a finger or two would soon rest on defects in our so-called broadened ken, quite as bad as the intolerance and unbelief that characterized the dawn of the eighteenth century. Even to-day Mr. John Burns is pacifying the ferocity of the English antivaccinationists by a Bill introduced into the House of Commons and which runs as follows: "No parent or other person shall be liable to any penalty under Section 29 or Section 31 of the Vaccination Act, 1867, if within four months from the birth of the child he makes a statutory declaration that he conscientiously believes that vaccination would be prejudicial to the health of the child, and within seven days thereafter delivers the declaration to the vaccination officer of the district." And in this country is the Truth in regard to the benefits of vaccination so securely lodged that Doubt would not display unwonted activities in case a death from vaccination were reported? Truly Emerson was right, when he said: "We think our civilization near its meridian, but we are yet only at the cock-crowing and the morning star."

MOTORS FOR MEDICAL MEN.

The question whether or not medical men should divorce themselves from the luxurious conveyances with which they have been so long identified and adapt themselves to the popular locomotive spirit of the times, is agitating a considerable number of minds both here and abroad. It is an excellent subject for heated argument; its many points lending themselves to the sort of oratory and invective peculiar to all subjects that bear the insignia of vastness and significance.

The English, being decidedly an epistolary people, have discussed the pros and cons of motors for medical men in innumerable letters printed in their medical journals, and though we Americans have not done the same thing, being rather averse to having our names appear under printed letters—that faithful watchdog, the Medical Critic, has made us fearful of the slightest publicity—our many-faceted conversations on the subject have embraced similar enthusiasms and prejudices. And this being the case, to-wit: that conversations are always ephemeral despite gesticulatory accompaniments, it is necessary to hark to England for published sentiments on the vital query of motor or no motor for the physician.

The *British Medical Journal* has been the principal depository for the high-tensioned "talks," the number of which is so appalling that the good nature of the editor must often have been overtaxed. In the June the 1st issue, one M. D. Durham writes enthusiastically about his motor: "Previously I kept two horses, but the disagreeable smell from the dung heap and the pest of flies in the summer, decided me on a change. * * * In conclusion, I may say I never was mechanically inclined, but I now find infinite pleasure in looking after my car and making the necessary adjustments to keep her up to working pitch. I have had better health in the last twelve months, and I frequently get little runs out to see friends which previously was impossible. I always advise my brother practitioners to stick to horses unless they are prepared to know and superintend their car themselves and on no account to leave themselves in the hands of a chauffeur."

This may sound like fulsome praise to those of us who have suffered some inconvenience on account of the inexperience of certain "medical chauffeurs," who, when we are about to cross a street, insist upon delaying our progress by allowing their machines to perform many wizard pentagrams; but to those who have enough enthusiasm for the motor to overlook slight inconveniences, the praise bestowed by M. D. Durham deserves attention. He has tried horses and found them wanting; he is his own chauffeur and feels secure in advising others to do as he does. So enamored is he of the new-fangled toy that his scientific mind ignores

the sad consequences so often dwelt upon by German and French scientists—the unsteadiness of the hand, sometimes resulting in partial paralysis, and the bacteria, infesting eyes, ears, mouth and clothes of the man behind the wheel.

What boots it to place on the highest pedestal a thing that is still caviare to the general? Among us there is a goodly number of revered physicians whose conservatism is entirely against the displacement of the buggy by the motor car. This adoration of the buggy, a peculiarly American institution, can be explained only on literary grounds. While celebrated English and French authors make no mention of the buggy as a vehicle for doctors, they give enough information about the delights of the gig, the cabriolet, the calash and the coach-horse, in connection with a doctor's peregrinations in town and country, to prejudice the American physician in their favor. Did not Dr. Benassis, the "Country Doctor of Balzac," and Dr. Slop, Laurence Sterne's creation, ride horseback, the latter "coming slowly along, foot by foot, waddling thro' the dirt upon the vertebrae of a little diminutive pony," to be thrown finally, "twelve inches deep in the mire?" And did not Dr. Pendennis have "a gig with a man to drive him," and a "poor old mother who had the happiness of seeing from her bedroom window, to which her chair was rolled, her beloved John step into a close carriage of his own—a one-horse carriage it is true, but with the arms of the family of Pendennis handsomely emblazoned on the panels? Then there was Chevalier Taylor, the quack oculist of the 18th century, who by means of a magnificent coach and four impressed the masses with his learning and respectability, a thing that would have been impossible had the most decorative motor car been used.

Remembering the literary and scientific influences responsible for the major part of the conservatism in our medical circles, will any one have the hardihood to advance other reasons than those given above for the retention of the weather-stained, grotesque creation of the vehicular art—the American buggy?

LITERARY NOTES.

L'Annee Psychologique, for 1907, edited by Alfred Binet, has been published by Masson et Cie, Paris. This is Volume XIII, and compares favorably with the preceding annuals on the same subject. The table of contents indicates great variety, among the articles being such as the Physician and the Pedagogue by Ley, The Rise and Fall of the N-rays, by H. Pieron, Expert Handwriting and the Dreyfus Case, by Crepieux-Jamin, Psychology of Thought, Larguier, and Chronic Mental Confusion, by Regis et Laures.

Professor Calmette, director of the Pasteur Institute at Lille, is the author of a new work entitled "Les Venins, les Animaux Venimeux et la Serotherapie Antivenimeuse." For fifteen years Professor Calmette has worked incessantly on the subject of the physiology of poisons. Although he has published many articles pertaining to the subject, in French, English and German journals, this is his first attempt to collect them in book form. All those interested in biological research will find this work one of great value.

Methuen & Co., (London), have recently published "The Evolution of Life" by H. Charlton Bastian, Emeritus Professor of the Principles and Practice of Medicine and of Clinical Medicine in University College, London. To quote the author in his Preface: "During the past year, in my leisure time, I have again been at work on the subject of Archebioses, and have, I trust, done something at last which will carry conviction to very many as to the reality of the present *de novo* origin of living matter. The penultimate chapters of this book will show that in my new attempt to solve this old and fascinating problem, the experiments have in some respects been conducted in a new way, though by methods as notable for their simplicity as for their stringency in reference to all possible precaution."

William Heinemann (London), has issued "Metabolism and Practical Medicine," by Carl von Noordan, Professor of the First University Klinik in Vienna. The English version is by a staff of translators under the editorship of I. Walker Hall, Professor of Pathology, University College, Bristol.

Prof. Hugo Magnus, the distinguished oculist, whose death in his sixty-fifth year is announced from Breslau, was the author of a number of valuable works, among them "Geschichte des grauen Staars," "Blindheit and ihre Verhuetung" and "Darstellung des Anges in der antiken Plastik."

An important contribution to the study of psychology is Professor W. Mitchell's "Structure and Growth of the Mind," to be issued shortly by The Macmillan Company. Professor Mitchell, who holds the Chair of Philosophy in the University of Adelaide, has written what might be called a universal introduction to psychology. It is not an introduction in the usual sense of an elementary survey, but rather an original investigation of the problems preceding the study of psychology proper. Although a product of original thought, the book is cast in a form easily grasped, and should prove of special value to the general reader.

Cassell and Company have just issued "Worry—The Disease of the Age," by Dr. C. W. Saleeby.

ORIGINAL ARTICLES.

A MEDICAL CAREER AND THE INTELLECTUAL LIFE.

By Casey A. Wood, M. D., D. C. L.

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Ever since I was capable of judgments that seemed to stand the test of later experience I have concluded that the most conspicuous want of the medical practitioner is a useful and pleasure-giving recreation. What that particular form of occupation should be may well vary with the individual, but that it should be instructive—perhaps unconsciously instructive—seemed to me to be self-evident.

Although the desire to be generally well-informed is almost universal, it cannot be said that the efforts in that direction of the average man are generally crowned with success. It will appear on investigation that for some reason or other a number of us are over-educated in some particular and ignorant, or comparatively ignorant, in others. It is not so evident that we do not know *much* as that we do not know many things. For the majority, this failure to be an all-round man has its *fons et origo* in one or more of the mere happenings of life. Either the forces born in us, our environment, the application of parental or other authority (well meaning but injudicious) or some other cause over which we have been unable to exercise control has intervened to give us a one-sided view of literature and life.

The failure to receive a well-balanced training is, so far as the physician is concerned, not far to seek. Most of our earlier years are occupied with the passing of a matriculation examination, the study of medicine proper and its application to the acquisition of a practice. All the paths and all the highways lead, or seem to lead, to the Rome of medicine. This habit of talking and thinking and dreaming about the *ars medica* and, probably of regarding all earthly and even all supernal things through the medical microscope, while it undoubtedly tends in most men to success in practice and it may be, to great achievements, undoubtedly contracts the mental horizon. He cannot fix a clear and steady gaze upon truth as a whole, who is always comparing her greater pictures with some medical masterpiece, however meritorious. Doubtless it is difficult, when the most impressionable years of one's life have been offered on the altar of a noble calling, to realize that the Universe offers other and quite as interesting aspects of nature as the manifestations of health and disease in even that wonder of wonders—our fellow man. Let us

then begin early in life to inquire what precautions one may take to avoid that learned narrowness which, without unjust criticism, may be laid to the door of the science and art of medicine.

That the reply to such a question is not upon the surface is evidenced by the fact that so many and so varied answers have been given by teachers apparently competent to advise. One of the numerous contributions to such a discussion is found in an address by Sir John Herschel, who, in eloquent measures, has set forth the advantages of literary pursuits. In books, says he, we find at once our solace, our refinements and our recreations. "If I were to pray for a taste which should stand me in stead under every variety of circumstances, and be a source of happiness and cheerfulness to me through life, and a shield against its ills, however things might go amiss, and the world frown on me, it would be a taste for reading. I speak of it, of course, only as a worldly advantage and a mode of pleasurable gratification. Give a man this taste, and the means of gratifying it, and you can hardly fail of making a happy man, unless, indeed, you put into his hands a perverse collection of books. You place him in contact with the best society in every period of history —with the wisest, the wittiest—with the tenderest, the bravest and the purest characters that have adorned humanity. You make him a denizen of all nations—a contemporary of all ages. The world has been created for him. It is hardly possible but that the character should take a higher and better tone from the constant habit of associating in thought with a class of thinkers, to say the least of it, above the average of humanity. It is morally impossible, but that the manners should take a tinge of good breeding and civilization from having constantly before one's eyes the way in which the best bred and the best informed men have talked and conducted themselves in their intercourse with each other. There is a gentle but perfectly irresistible coercion in a habit of reading, well directed, over the whole tenor of a man's character and conduct, which is not the less effectual because it works insensibly and because it is really the last thing he dreams of. It cannot, in short, be better summed up than in the words of the poet—

> Emollit mores, nec sinit esse feros.
> It civilizes the conduct of men—and *suffers* them not to remain barbarous.

Far be it from me to underestimate the value of good literature or even to doubt that

> Books are men of higher stature,
> And the only men that speak aloud for future times to hear!

but there is a something in medical ideals not entirely satisfied by the thoughts of others, however lofty and inspiring. The pleasure of pe-

rusing and a certain satisfaction in pure literature are not denied to the physician more than to other men, but the *physician* (using the word in its derivitive sense) must have a feeling of unrest who is not engaged, even during his recreation, in work likely to add to the sum total of human knowledge. One of the most beautiful and pathetic of the Niebelungen myths tells us how the demigod Siegmund declined a life in Walhalla when he found that the earth-born Sieglinde was denied admittance to Paradise.

Siegmund:
Begleitet den Bruder
Die braeutliche Schwester?
Unfangt Siegmund
Sieglinde dort?

Brunnhilde:
Erdenluft.
Muss sie noch athmen
Sieglinde
Sieht Siegmund dort nicht!

Siegmund:
So gruesse mir Walhall,
Gruesse mir Wotan,
Gruesse mir Walse
Und alle Helden—
Gruess' auch die holden
Wuensches—Maedchen:
Zu ihnen folg' ich dir nicht.

So it is with the doctor; enduring satisfaction comes to him only when he follows the physicist's ideals. For these, at times we are called upon to desert even the Elysian Fields of literature!

The proposition that every man, especially he who is absorbed in a business (and what American is not?) should have an additional occupation that may also serve the purpose of a recreation, is by no means new. Not only is there nothing original in the idea itself, but a discussion of the kind and amount of the occupation forms no inconsiderable part of the literature of medical sociology. For example, quite recently one of our most distinguished Fellows, writing in the *Saturday Evening Post,* gives men of fifty (or thereabouts) such excellent advice that I am tempted to repeat part of it, even to some of his equally learned associates.

"First, and most vital, keep up your exercise and recreations, especially the latter. Drop tennis when you find it exhausts you, or hurries your heart afterward or disturbs your sleep, but take an hour a day more golf in its place. If the rifle with its long, heart-straining tramps over mountain and dead-fall tires you, so that you don't react from the trip, take to the shot-gun and the stubble-fields and copses. If the gun becomes too

strenuous, fall back on the rod, but don't give up your outdoor life on any account. There is no need to take too much anxious thought about these problems. Nature has a guiding instinct for middle age and declining vigor, just as she has for youth and growing powers. As long as you like to take active exercise and sport, and feel exhilarated and refreshed (even if a little stiffened) by them, keep them up; they are doing you good. When you feel that they are getting a little too much for you, when you dont' feel fresher for them next day, cut down on them a little in intensity. If the man of the dominant decades is so unfortunate as to have no hobby, by all means let him beg, borrow or hire one. Better still, two—one indoor and one outdoor. Nothing will do more to keep him young. Roses, chrysanthemums, cherries, Orpingtons, games, collies, bull-terriers Angoras, wild flowers, birds, shells, butterflies, book-plates, first editions, clocks, old blue andirons, stamps, brass, bric-a-brac —no matter what, so long as they arouse an interest entirely apart from their monetary value. Next to outdoor sports they are the best Elixir of Youth known. Don't plan to retire from business unless you have a hobby to retire on, as well as a competency."

It may appear needless for me to choose a subject for the presidential address that, when all is said, is naught but a plea for the truth of an ancient and well-worn contention. On the other hand, if any of you will make inquiries among his medical friends he will, I believe, be struck not only by the poverty, but by the paucity of recreational resources at their command. This defect, as I conceive it, is perhaps less prevalent among men whose literary accomplishments are well above the average—for example, among men eligible to Fellowship in the American Academy of Medicine. This condition is doubtless due to the fact that the range of possible occupations is the greater because of an early acquaintance with them made during school and college life. It is, of course, more likely that the physician will revive college associations in the shape of advanced literary or scientific pursuits than if he had never taken part in them. Conversely, the practitioners whose extra-medical studies have been confined to cramming those subjects which were needed to satisfy a more or less critical matriculation examiner—these are unlikely to be followed in after years as a joyous surcease from the pains of practice or the sorrows of our daily conflict with the powers of darkness.

Centuries before and years after Herbert Spencer wrote his famous chapter on that subject, many a philosopher observed that there is no constant, or at least no necessary, relation between learning and wise living. Knowledge comes, often, because a number of taskmasters have stood over us for a dozen years and driven us as slaves to the scholastic galleys, but wisdom, how often she lingers until experience has brought home to us—if she ever does—those lessons that our teachers fondly imagined (or

perhaps only hoped) had become organic in us and would ever issue in wise and fruitful acts. These tender offshoots from the tree of knowledge, that, finding a congenial soil within our garden of life, spring up and bear ornamental flowers and edible fruit we should be thankful for —but they are comparatively rare. So far as wisdom in action is concerned, heredity, environment and experience rank as causative factors, well above precept.

It might, in this connection, even be argued that a literary education has in it certain inhibitory elements so far as living the hygienic life is involved, in that the "pale cast of thought" is simply suggestive of systemic anemia. Certainly an indoor life is not a healthy life nor is it conducive to sanity of either thought or action. In advocating the pursuit of some branch of the natural sciences as the desirable recreation of the practitioner of medicine, I have not forgotten those members of our profession who, while pursuing their professional avocation, have achieved greatness in the various fields of literature. We need not leave our own country or our own times for a list of men whose contributions to letters have won fame wherever the English language is read. There will at once occur to you the names of Oliver Wendell Holmes, of Weir Mitchell, of John William Draper, of Wm. Osler, and of many others who have contributed their quota but, bearing in mind the warning of Woods Hutchinson "not to drop a recreation unless one can replace it by another equally valuable," I desire to put forward a plea (or several pleas) for the adoption of what I may be allowed to call the "outdoor" sciences as the most useful and most valuable of all the recreations.

Imprimis, it is hardly necessary that I point out to you the close relation between the natural sciences and the study and practice of medicine. One cannot run over in his mind the preparation which is generally recognized as needful in a medical *repertoire* without including some part *of all* of them. Where would rational medicine rest to-day without a considerable knowledge of practical biology, physics, botany, zoology and chemistry? It is impossible to conceive of a well-informed physician ignorant of these branches. In all ages he knew, or was expected to know, about all of these sciences that was capable of being acquired by the educated man of his times. I sometimes think that Moliere would not have had ocasion to write his "Medicin malgre lui" if there had been a Huxley, a Darwin or a Spencer accessible in his day. The physician has generally been about as ignorant, or as learned, as the physicists of his day. I believe, then, we may admit that the medical man who chooses the pleasant ways of a physical science, may walk upright within them and need never fear that he is far from home.

Then, again, see how much more "worth while" the investigations of science are than mere book learning. If I were disposed to argue the

question I believe I should first read carefully Herbert Spencer's essay on Education and the "Town Geology" of Charles Kingsley, whose name is dear to those who love science, revere literature and respect religion, because he lived them all in one fair life.

Spencer, in an endeavor to answer the query, "What knowledge is of most worth," believes that it may be answered by an appeal to conduct tempered by knowledge. "How to live?—that is the essential question for us. Not how to live in the material sense only, but in the widest sense. The general problem which comprehends every special problem is, the right ruling of conduct in all directions, under all circumstances. In what way to treat the body; in what way to treat the mind; in what way to manage our affairs; in what way to bring up a family; in what way to behave as a citizen; in what way to utilize all those sources of happiness which nature supplies—how to use all our faculties to the greatest advantage to ourselves and others—how to live completely." And these conditions, as you know, the author shows to be filled to a very large degree by a careful study of the natural sciences.

Without desiring to bore you by needless reiteration of a truism let me again refer to the high value which Spencer attaches to biology which, by the way, he thinks has a fundamental bearing on self-preservation.

Another argument in favor of a recreation that involves a study of some branch of the natural sciences is the fact that it is generally an outdoor occupation. In this fact lies a peculiar advantage because the pursuit of such a recreation forces the man who mainly does an office practice, into the open air and encourages him to lead, at least in part, an outdoor life, but it also falls in with the existence of the physician whose daily vocation is carried on in the very workshop where the tools of his trade are always at hand.

If Emerson wrote what Thoreau thought, the student of nature will willingly listen to the following words: "In the woods a man casts off his years as the snake his slough, and at what period of life soever, is always a child. In the woods is perpetual youth. Within these plantations of God a decorum and sanctity reign, a perennial festival is dressed, and the guest sees not how he should tire of them in a thousand years. In the woods we return to reason and faith. There I feel that nothing can befall me in life—no disgrace, no calamity (leaving me my eyes) which nature cannot repair." Kingsley, in the preface to his little work says, "I have tried rather to teach the *method* of geology than its facts; to furnish the student with a key to all geology, rough indeed and rudimentary, but sure and sound enough, I trust, to help him to unlock most geological problems he may meet in any quarter of the globe. But young men must remember always that neither this book nor all the books in the world will make them geologists. No amount of book learning will

make a man a scientific man—nothing but a patient observation and quiet and fair thought over what he has observed. He must go out for himself, see for himself, compare and judge for himself, in the field, the quarry, the cutting. He must study rocks, ores, fossils in the nearest museums, and thus store his head not with words but with facts. He must verify—as far as he can—what he reads in books, by his own observation, and be slow to believe anything even on the highest authority, till he has either seen it, or something like enough to it, to make it seem to him probable or at least possible. So, and so only, will he become a scientific man and a good geologist and acquire that habit of mind by which alone he can judge fairly and wisely of facts of any kind whatever." Where, let me ask, will you find any collection of sentences that more thoroughly breathe the spirit of modern medical research than the foregoing? Finalities the truth does not always permit us to know—

Sed pater omnipotens speluncis abditit atris

but each of us may look things in the face and try to see them as they actually are.

It is not my purpose to pass before your tired eyes all the outdoor sciences for your selection as a recreation, because what is true of one is generally true of a dozen others. I shall close by a reference to botany, with its many subdivisions into agriculture, floriculture, arboriculture, forestry, etc., as offering a most varied choice to the scientific activities of the medical man. It is closely allied in all its parts to the peculiar training and the daily practice of every doctor. In its study are combined all the virtues, all the pleasures, all the entertainments, all the recreations of the scientist.

I would, at this juncture, refer those who fear that the study of natural science is likely to extinguish the poetry of life in the close consideration of things material, to Edmund Spenser's Catalogue of the Trees.

Much can they praise the trees so straight and high,
The sailing pine, the cedar proud and tall,
The vine-prop elm, the poplar never dry,
The builder oak, sole king of forests all;
The aspen good for staves; the cypress, funeral,
The laurel, meed of mighty conquerors.
And poets sage; the fir that weepeth still,
The willow, worn of forlorn paramours.
The yew, obedient to the bender's will,
The birch for shafts, the sallow for the mill,
The myrrh sweet bleeding of the bitter wound,
The war-like beech, the ash for nothing ill,
The fruitful olive and the plantane round,
The carver holm, the maple seldom inward sound,

Or, if this evidence is insufficient, what about that poet-botanist whose heart "danced with the daffodils," probably at the time he saw

> A violet by a mossy stone
> Half-hidden from the eye,
> Fair as a star, when only one
> Is shining in the sky!

In choosing the expression "Intellectual Life" as a part of the title of this address I did so, bearing quite distinctly in mind that I should attempt to show that the study of natural science is not only what I have claimed for it but that its appeal to the intellect is more direct than pure literary pursuits, however great their merit. In asserting that the pursuit of scientific studies is the natural and proper recreation of the medical man, I have said little about persistence of value. While golf and tennis lose their charms, and the collecting of china and rugs ceases to attract, the intimate association with and a contemplation of the laws that regulate and the mysteries that surround what we call Nature, is not only a pleasant recreation but has the prime advantage of enduring to the end and bringing with it that peace which harbors no delusion and conceals no misfortune because it is founded on an immovable rock, the truth that is in and for humanity.

It is peculiarly appropriate that the Nurse upon whose knee and at whose feet we have learned all we know and who has tenderly watched over us in our wanderings towards the Goal should close our eyes in death. Inasmuch as

> Nature never did betray
> The heart that loved her.

She should, that at the end of our existence, take us unto Herself. The prayer of St. Augustine has been translated into a more modern view by Anatole France by the thought that it is the voice of our Mother Earth that calls to us in the evening of life, and, when the night falls, wraps us within her everlasting arms.

A STATISTICAL STUDY OF THE RELATION BETWEEN THE HEIGHT OF THE LONGITUDINAL ARCH AND THE FUNCTIONS OF THE FOOT.*

By PHIL. HOFFMANN, M. D., St. Louis.

During the summer of 1904, while examining the feet of primitive peoples at the St. Louis World's Fair (L. P. E.), the great variety of impression records obtained from feet that were functionally normal led me to study statistically the question of relation between the height of the longitudinal arch and the usefulness of the foot.

The records forming the basis of these statistics were made by the method of weight bearing on smoked paper. It is true that they do not really show the height of the longitudinal arch, as they are commonly believed to do, but show the breadth of the arch and how much of the sole comes in contact with the ground on weight bearing. This, however, bears a relationship to the height of the arch, and I speak of height in connection with these records in this sense only. Comparison of smoked imprints with plaster casts of the same feet, taken while bearing the body weight, showed, in each instance, that the carbon impression corresponded to the flattened area of the sole of the cast, showing that the weight-bearing area could thus be accurately determined. The casts also showed that there was an almost constant relation between the extent of this area and the arch height, that is, the further the imprint extended inward, the lower was the arch.

To simplify the comparison of records, I chose six types of arches, ranging from the well marked to the totally absent, and grouped the intermediate grades with the types they most nearly resembled. Fig. 1, A, high arch; B and C, moderate; D, somewhat low; E, very low; F, absent.

Impressions were taken of 186 individuals that had never worn footwear, seven of which were Central African Negroes, and the balance Filipinos. It is significant that among these I did not find a single foot associated with the symptoms of weakness so common in adult shoe-wearing feet, which are weakened by the restraint the shoe exerts over function. Through interpreters I made careful inquiry in regard to this, especially whenever I found an arch that was exceptionally low. All had strong and flexible feet. Lowness of the arch, where such was shown by the impression, was real, and not merely simulated by an underlying pad of fat.

The following tables, 1 to 8, illustrate the frequency with which the different types occurred in the barefooted groups:

* Read before the St. Louis Medical Science Club.

Table 1. Frequency with which the different types of arches shown in Fig. 1 occurred in 46 Moros, Philippine Islands. Feet symptomless:

Type of arch		Number of individuals		Per cent	
	A	4		8	16/23
	B	6		13	1/23
	C	7		15	5/23
	D	7		15	5/23
	E	9		19	13/23
	F	13		28	6/23
		46		100	

Table 2. Frequency of different types in 27 Bagobos, Philippine Islands. Feet symptomless:

Type of arch		Number of individuals		Per cent	
	A	2		7	11/27
	B	6		22	6/27
	C	5		18	14/27
	D	4		14	22/27
	E	5		18	14/27
	F	5		18	14/27
		27		100	

Table 3. Frequency of different types in 3 Mangyans, Philippine Islands. Feet symptomless:

Type of arch		Number of individuals		Per cent	
	C	1		33	1/3
	E	2		66	2/3
		3		100	

Table 4. Frequency of different types in 70 Igorrotes, Philippine Islands. Feet symptomless:

Type of arch		Number of individuals		Per cent	
	A	6		8	4/7
	B	2		2	6/7
	C	8		11	3/7
	D	24		34	2/7
	E	18		25	5/7
	F	12		17	1/7
		70		100	

Table 5. Frequency of different types in 33 Negritos, Philippine Islands. Feet symptomless:

Type of arch		Number of individuals		Per cent	
	A	3		9	3/33
	B	4		12	4/33
	C	5		15	5/33
	D	6		18	6/33
	E	6		18	6/33
	F	9		27	9/33
		33		100	

Table 6. Frequency of different types in all Philippine tribes. Feet symptomless:

Type of arch...	A	Number of individuals...	15	Per cent... 8 4/9
	B		18	10
	C		26	14 5/9
	D		41	22 8/9
	E		40	22 3/9
	F		39	21 7/9
			179	100

Table 7. Frequency of different types in 7 Central African Negroes. Feet symptomless:

Type of arch...	A	Number of individuals...	2	Per cent...28 4/7
	B		1	14 2/7
	D		2	28 4/7
	E		1	14 2/7
	F		1	14 2/7
			7	100

Table 8. Frequency of different types in all barefooted subjects examined. Feet symptomless:

Type of arch...	A	Number of individuals...	17	Per cent... 9 4/31
	B		19	10 7/31
	C		26	14
	D		43	23 4/31
	E		41	22
	F		40	21 16/31
			186	100

In addition to the 186 barefooted individuals, I examined 45 South African Negroes, all adult males with functionally good feet, who had gone barefooted up to early manhood, and had worn shoes during the last five or six years only. Table 9 shows the frequency of the different types of arches in this group:

Table 9. Frequency of different types in 45 South African Negroes. Feet symptomless:

Type of arch...	A	Number of individuals...	6	Per cent...13 3/9
	B		7	15 5/9
	C		8	17 7/9
	D		7	15 5/9
	E		11	24 4/9
	F		6	13 3/9
			45	100

FIG. 1.—A few of the types of arches found in normal feet.

That as great variation in the height and shape of the longitudinal arch exists in Caucasian shoe-wearers as in barefooted peoples, is shown in table 10, which is based upon the examination of 200 pairs of normal, or, at least, symptomless feet:

Table 10. Frequency of different types in 200 Caucasian shoe-wearers. Feet symptomless:

Type of arch	Number of individuals	Per cent
A	27	13½
B	20	10
C	27	13½
D	53	26½
E	40	20
F	33	16½
	200	100

That the same is true of the American shoe-wearing Negro is shown in table 11, which is based upon the examination of 100 pairs of symptomless feet.

Table 11. Frequency of different types in 100 American shoe-wearing Negroes. Feet symptomless:

Type of arch	Number of individuals	Per cent
A	18	18
B	13	13
C	19	19
D	21	21
E	16	16
F	13	13
	100	100

Table 12 shows the variation in five sandal-wearing Ainus.

Table 12. Frequency of different types in 5 Ainus, Caucasian sandal-wearers, Northern Japan. Feet symptomless:

Type of arch	Number of individuals	Per cent
B	1	20
C	1	20
D	1	20
E	2	40
	5	100

It is probably true that weakness of the structures composing and maintaining the longitudinal arch is, in some instances, accompanied by a lowering of the arch, and, that, on account of this lowering, the area of the sole of the foot coming in contact with the ground is increased. However, it was demonstrated by examination of imprints (collected between 1892 and 1904), of 560 feet that presented more or less typical symptoms of strain or weakness of the longitudinal arch, that gross change in the height of the arch is not as frequent an accompaniment of weakness as is commonly taught; in fact, that the average character of the imprints of feet with weakened arches does not differ much from the average character of those of symptomless feet. The result of this examination is shown in table 13.

Table 13. Frequency of different types in 560 Caucasian shoe-wearing feet that presented symptoms of weakness of the longitudinal arch:

Type of arch	Number of feet	Per cent
A	64	11 3/7
B	72	12 6/7
C	76	13 4/7
D	92	16 3/7
E	108	19 2/7
F	148	26 3/7
	560	100

Table 14 shows the comparative frequency with which the different types of arches occurred in Philippine Malays (barefooted); Central African Negroes (barefooted); South African Negroes (barefooted up to the last six years); American Negroes (shoe-wearers); Caucasians (shoe-wearers); Ainus, Caucasians, Northern Japan (sandal-wearers); all presenting symptomless feet; and in Caucasians (shoe-wearers), under treatment for symptoms of weakness of the longitudinal arch.

Table 14.

	Types—For types see figure 1.						
	A Per Cent.	B Per Cent	C Per Cent.	D Per Cent.	E Per Cent.	F Per Cent.	Total Per Cent.
Philippine Malays, barefooted. Feet symptomless. Individuals examined, 179	$8\frac{4}{9}$	10	$14\frac{5}{9}$	$22\frac{8}{9}$	$22\frac{3}{9}$	$21\frac{7}{9}$	100
Central African Negroes, barefooted. Feet symptomless. Individuals examined, 7. Number too small for reliable conclusions	$28\frac{4}{7}$	$14\frac{2}{7}$	....	$28\frac{4}{7}$	$14\frac{2}{7}$	$14\frac{2}{7}$	100
South-African Negroes, barefooted up to last six years. Feet symptomless. Individuals examined, 45	$13\frac{3}{9}$	$15\frac{3}{9}$	$17\frac{7}{9}$	$15\frac{5}{9}$	$24\frac{4}{9}$	$13\frac{3}{9}$	100
American Negroes, shoewearers. Feet symptomless. Individuals examined, 100	18	13	19	21	16	13	100
Caucasians, shoewearers. Feet symptomless. Individuals examined, 200	$13\frac{1}{2}$	10	$13\frac{1}{2}$	$26\frac{1}{2}$	20	$16\frac{1}{2}$	100
Ainus, Caucasians, Northern Japan. Sandalwearers. Feet symptomless. Individuals examined, 5. Number too small for reliable conclusions	....	20	20	20	40	....	100
Caucasians. Shoewearers. Under treatment for symptoms of weakness of the longitudinal arch. Individuals examined, 560	$11\frac{3}{7}$	$12\frac{6}{7}$	$13\frac{4}{7}$	$16\frac{3}{7}$	$19\frac{2}{7}$	$26\frac{3}{7}$	100

Analysis of table 14 shows that in the 536 individuals of different races, with symptomless feet, the American and primitive Negroes presented a smaller percentage of low and a larger percentage of high arches than did the Caucasians. This contradicts a commonly accepted view. The Philippine Malay showed a somewhat larger percentage of low arches than did either the Negro or Caucasian. Another thing shown in this table is that the 560 Caucasian feet with symptoms of weakened arches, did not present a much larger percentage of low arches than did the normal or symptomless Caucasian feet. The histories accompanying these 560 impression-records, show

FIG. 2.—Impression records of the normal feet of a Bagobo woman, Philippine Islands. Note difference between right and left.

that the feet with long standing or severe symptoms did not occur oftener among the lower arch-types than did those whose symptoms were mild or of short duration.

While it is true that, usually, the impression records of the normal right and left foot of one individual are practically alike, there is, in occasional instances, a marked difference, Fig. 2. This occurs in both primitives and shoe-wearers. So, too, in individuals with one foot strong and symptomless, and the other presenting symptoms of arch strain or weakness, the impression records of the two feet, while usually the same, show, occasionally, one arch to be lower than the other, *and the lower record is just as frequently made by the strong as by the weakened foot.*

If these statistics are a fair index for all feet, one may be justified in drawing the following conclusions:

1. That there is no one type of arch as the normal.

2. That, contrary to common opinion and teaching, the height and shape of the longitudinal arch are of no value in estimating the strength or usefulness of the foot.

3. That normal feet present high, medium and low arches in nearly the same proportions as do feet with weakened arches.

4. That weakness of the longitudinal arch rarely results in its de-

pression, and that *flat foot* as a *pathological* entity is not common (compare tables 10 and 13.)

5. That the impression records of the longitudinal arch, commonly made by surgeons, are of no value in the diagnosis of arch strain, or weakness, *so-called* flat-foot, whose symptoms are dependent upon a weakened arch, and not upon its lowness, except in so far as this lowness is a transition from an original higher condition with concomitant change in the relationship of the tarsal bones, which transition occurs by far less often than is generally believed.

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TWO CASES OF INFECTION WITH A GAS-FORMING BACILLUS; FOLLOWED BY OPERATION AND RECOVERY.*

By R. C. Loving, M. D., 1st Lt. Asst. Surg., U. S. Army.
(From the Surgical Service, the Division Hospital, Manila, P. I.)

In 1891, Welch and Nuttall[1] reported the post-mortem finding of a new gas-forming bacillus in a patient who died of an aneurism of the ascending aorta, and chronic pulmonary and acute miliary tuberculosis. The subcutaneous connective tissue, the heart and blood-vessels, and other organs of the body contained gas. The organism isolated was found in pure culture wherever gas was found in the tissues, It proved to be an obligatory anaerobe and was from 4 to 6 microns in length, was non-motile, stained by Gram, coagulated milk, and did not liquefy gelatin. This organism was named Bacillus Aerogenes Capsulatus, which name was changed very properly by Migula, in 1900, to Bacillus Welchii. It was found to be non-pathogenic but developed in the tissues of the inoculated animal if the animal was killed shortly after the introduction of the organism.

Two cases of infection with a gas-bacillus occurring in my professional work during the past year of service in the Philippines, (in one of which the organism as described above was isolated and identified, and in both of which surgical measures other than amputation were resorted to with success) may be of sufficient general interest to be made a matter of record.

Case 1.—Tambogan, a Moro tao, was shot by an American soldier on the afternoon of June 22, 1905. Three days later he was brought in to Camp Keithly, Mindanao, by friendly Moros, and was subsequently referred to the surgeon for treatment.

He was a young Moro of average height. Physical examination revealed nothing of importance other than the area of the wound. The

* Published by permission of the Surgeon General, U. S. Army.

wound of entrance was in the left ischio-rectal region close to the tuberosity of the ischium. From it was obtained on slight pressure, a bubbling, frothy, fluid, which had a very foul odor. The margin of the wound was swollen and gangrenous. His left thigh was swollen to twice the size of the right, was very tense and edematous, and crackled on pressure. Percussion gave a sound very much like that of a muffled drum. The subcutaneous crepitation extended over the entire thigh from the upper part of the calf of the leg to and including an area 6 c.m. above Poupart's ligament in front, and to the upper part of the buttock posteriorly. The left buttock was so distended that it reached 4 c.m. past the median line. His pulse was very weak but not rapid and his temperature on admission was 102. He was profoundly depressed.

He was immediately operated upon. On account of his poor condition and the impossibility of securing healthy flaps for an amputation, it was decided to clean out the necrotic tissue and secure good drainage.

The first incision extended 18 c.m. around the inner border of the left buttock. Passing through the wound of entrance, it opened a gangrenous tract which led from the ischio-rectal fossa downward toward the inner side of the knee.

The second incision, 20 c.m. in length, was over the adductor group of muscles. A 38-cal. bullet from a Colt's revolver was found along the inner surface of the femur at the junction of the middle and lower thirds.

A third incision extended along the outer margin of the posterior group.

A fourth incision opened the fascia of the anterior group. Numerous smaller incisions were made to drain the subcutaneous areolar tissue.

The first three incisions were connected and held open by through and through strips of gauze and the limb wrapped in a loose dressing.

A bath-tub was then improvised out of a rubber sheet, and six hours after the operation the patient was put in the tub with enough bichloride of mercury solution of 1 to 5000 strength to cover the limb. He was redressed every morning and soaked as described for four hours on six consecutive days with no untoward symptoms. On the second, third, and fourth days he was given an additional irrigation with potassium permanganate solution, to diminish the foul odor which had necessitated his isolation in a separate tent.

After the formation and gradual separation of large sloughs the patient's condition steadily improved. He was discharged from the hospital on July 28, 1905, with a serviceable limb. The only impairment was a slight muscular stiffness.

On account of lack of facilities I could not definitely determine the infecting agent. I found, however, on smears from the wound, a coarse

bacillus which showed a halo when stained with the usual aniline dyes, and which grew at the depths of a stab in plain agar with formation of a slight bleb. In view of the clinical appearances of this case and the findings in the second, I am of the opinion that it was a true case of infection by the gas bacillus of Welch.

Case 2.—The second case was that of Cadaba, a Philippine Scout, who was gored in the leg by an angry carabao. He was brought to the hospital three days later. The limb was distended with gas from the toes to the middle third of the thigh. The wound was in the upper portion of the middle third of the left leg midway between the tibia and fibula. Bulging from it was a dark, frothy mass of blood-clot and decomposed muscle tissue. There was likewise a characteristic discharge of foul gas and frothy serum.

Encouraged by the success in the first case, we decided to clean up the wound instead of amputating, which at first seemed advisable. While scooping out the rotten muscle tissue with the finger the anterior tibial artery came away and started a brisk hemorrhage which was controlled with difficulty. The vessel walls would not hold a ligature and it was necessary to leave a hemostat on the artery where it pierced the interosseous membrane. Multiple incisions were made and the same after treatment used as in the first case. Except for an alarming hiccough he had an uneventful but tedious convalescence.

In this case the bacillus aerogenes capsulatus seu Welchii was isolated by Lt. H. D. Bloombergh, Asst. Surg., U. S. Army, Pathologist of the Division Hospital. His report showed that the organism corresponded in every respect to the organism originally described by Welch. It therefore failed to liquefy gelatin, although some observers believe that under the proper conditions it is a liquefier. As a rule the organism stained very well with Gram, but occasionally in the same smear from the animal cadaver or from a young culture, individual bacilli were found to have been decolorized. No spores could be demonstrated.

Welch and Flexner early showed that this capsulated bacillus was found normally in the intestinal contents of man and in the soil. And from the work later on accomplished by Welch, his associates, and pupils, it would seem that this organism is one of the most widespread of all bacteria, having been frequently found in the intestinal canal of man and numerous animals, in the soil, in the sweepings from the floors of wards of hospitals, in cess-pools, in market milk, in wounds where the organism had shown no signs of its presence, and even in scrapings from normal skin.

It has been found practically in every part of the body that can be invaded by organisms of similar pathogenic properties. In this connection it is interesting to note that the organism plays a role in the forma-

tion of "holes in the brain" and "gas cysts" as shown by Reuling and Herring[2] and Madison[3]. Of equal interest is the finding by Gwyn of the organism in the circulating blood fifteen days before death in a case which ante-mortem showed no signs of the infection but in which unfortunately no post-mortem could be obtained. Regarding the geographical distribution, Welch in 1900 speaks of cases being reported from Germany, Italy, Austria, and France, and he later states that Flexner informed him that during the latter's three months' stay in Manila, three cases came under observation.

Examination of a report to the Surgeon General, the U. S. Army, submitted by Dr. R. P. Strong, Manila, P. I. in 1900, at which time he was in the Army medical service as Pathologist at the old 1st Reserve Hospital, shows that the bacillus aerogenes capsulatus was found in eighteen cases at necropsy. He states that in four of these cases the infection was probably post-mortem. Major W. D. Crosby, Surgeon, U. S. Army, tells me that he had two cases of this infection while in command of the 1st Reserve Hospital, Manila, P. I. One was a gun-shot flesh wound of the abdomen. It was given free drainage and treated antiseptically with a good result.

The other case was a gun-shot wound of the leg. The patient did not recover, although amputation was performed.

There are cases on record of incomplete amputation of an infected extremity with drainage and antiseptic treatment applied to the stump.

I have been unable to secure access in Manila to the article by Bloodgood[4] in which I believe he has shown that incision followed by the bichloride bath was effective in certain of his cases. The results obtained by Stewart[5] show that this treatment may be sufficient and it seems time to consider the advisability of not amputating in cases of simple gas bacillus infection without complications.

The author's cases were only two. But the involvement was extensive and amputation was not necessary. Both were natives and it is possible that natural immunity has considerable influence in the Philippine Islands, and that the native accustomed to live in a humid atmosphere and amidst the damp filth of his lowly habitation is less susceptible to infection and therefore more amenable to treatment.

The gas bacillus is saprophytic and anaerobic and seems to elaborate toxins of feeble potency. In experimental inoculations in animals it is necessary to kill the animal to secure a growth. It has been found in living tissue but under such conditions it did not possess its gas producing properties, and was probably not actively growing. There are two cases on record of amputations which were covered with emphysematous flaps and which nevertheless recovered. It is highly probable that they did recover because sufficient drainage was secured to obviate the me-

chanical effects of distension. The infection was certainly not removed and the shock of an amputation was added.

In the light of these facts it seems much more rational to make numerous free incisions to liberate the gas and give complete drainage. As an after treatment the bichloride soak continued for hours on successive days with occasional permanganate douche is recommended.

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MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

THE EARLY DIAGNOSIS OF CARCINOMA OF THE STOMACH.—V. Aldor (*Wiener klin. Wochenschrift*, 1907, No 20.).—There is no attempt on the part of the writer to give a general discussion of the methods of diagnosing carcinoma, but he enters at once into a consideration of three laboratory methods which have been carefully tested by him. Salkowski's method of determining the presence of albumose in the urine is regarded as a great diagnostic help in these cases.

Aldor gives a modification of this method which he has worked out in the examination of a large number of such cases. In forty carcinoma cases 56 per cent. showed the presence of albumose. While the mere presence is not significant of carcinoma, nevertheless the writer regards the constant presence as of great significance.

Solomon's method of determining the presence of nitrogen in the carefully washed stomach is also regarded as valuable in recognizing the presence of an ulcer, not necessarily however of a malignant type. Lastly, occult hemorrhage is discussed and special emphasis is made on the necessity of placing these patients in the hospital, where a careful diet can be carried out for some days before any conclusions can be drawn from the positive findings. Aldor emphasizes the fact that while these three methods in themselves are not of great diagnostic value, they may lead to a very early diagnosis when all three are present together with other symptoms.

SURGICAL ASPECTS OF SOME DIGESTIVE DISORDERS FROM THE STANDPOINT OF THE INTERNISTS.—Arneill (*New York Med. Jl.*, June 22, 1907).—The writer reports a number of stomach cases in some of which brilliant results were attained by operation, while in others the patients were not benefited. The cases in which results were satisfactory come under that group in which surgeons have learned by experience alone that gastro-enterostomy is the ideal operation and satisfactory results can always be obtained, namely those with pyloric obstruction, stagnation and chronic hemorrhage. The second group includes that class of cases in which the neurotic element was not excluded, and in which, at the time of operation, an ulcer was not demonstrable.

The writer makes a few statements in regard to the diagnosis of ulcer of the stomach and duodenum and concludes by recommending exploratory operations, where a conscientious, intelligent and scientific examination leaves doubt as to the diagnosis and treatment. He rightly suggests that the dangers of exploration are much smaller than those of procrastination.

Pneumaturia, With Report of a Case.—Taussig (*Boston Med. and Surg. Jl.*, June 13, 1907).—The writer reviews the literature on the subject, which, though dating back as early as 1860, comprises comparatively few cases. The case described is that of a colored woman, age 34, who had previously undergone an operation for carcinoma of the cervix uteri. This patient was catheterized frequently following the operation. Fistula was not present and a bacteriological examination of the urine showed the presence of a bacillus, which the writer regards as an intermediate type between the bacterium coli commune and the bacillus lactis aerogenes. Sugar was not present in the urine. The conclusions drawn by the writer give a general knowledge of this rare condition.

Pneumaturia may occur either as the result of a rectovesical fistula or of intravesical fermentation. In the latter type, the gas may originate either from the fermentation of glucose in diabetes, or from the decomposition of proteid substances in cystitis. Of the nondiabetic cases, the micro-organism responsible for the pneumaturia has been isolated in only eight cases: in three, it was the bacillus lactis aerogenes, and in five (including the one reported above) the bacterium coli commune. In pneumaturia due to the bacillus lactis aerogenes, the gas formation is readily referable to the peculiar characteristics of the bacillus. In pneumaturia due to the bacterium coli commune, the gas formation may be due: To the presence of some proteid, not yet definitely determined, that yields a gas when broken down anaerobically by the bacterium coli commune, as suggested by Adrian and Hamm; or to the presence of a peculiar strain of bacterium coli commune that is capable of producing gas where the usual varieties fail to do so.

The fact that the bacterium isolated from this case had in its earlier generations an abnormal gas-producing power on ordinary culture media lends support to the second hypothesis.

Indicanuria, its Etiology and Practical Significance.—Porter (*Medical Record*, June 15, 1097) thinks that there is no pathological condition the interpretation of which is of greater importance to the general practitioner. While he recognizes indicânuria as a symptom, nevertheless he regards it as one of great value. He accepts the theory of the formation of indican in the intestinal tract and does not regard its formation in the liver as possible. Its presence in the urine is never normal, but always indicates some abnormal condition, being the result of a putrefactive process in the intestinal canal. He regards errors in diet, lack of out-of-door exercise, defective digestive secretions and profound disturbance in the nervous mechanism as conditions favoring the production of indican. The writer regards the absorption of other toxines which are produced at the same time as the indican in the alimentary tract as playing a great part in the production of an endless train of symptoms, especially brought about by their action upon the nervous system. For a successful treatment of this condition, it is necessary that the etiological factors entering into the production of indicanuria be recognized and overcome.

A Consideration of the Question of the Relation of Ehrlich's Reaction, Bacteriemia and Widal's Reaction in Typhoid Fever.—A Th. Genken. (*Muench. Med. Wochenschrift* No. 18, 1907).—The writer in a preliminary report concludes that the diazo reaction and bacteriemia in cases of typhoid fever which have been treated by drugs, not disturbing the diazo reaction, run parallel. The diazo reaction is found only in that stage of typhoid in which the Eberth's bacillus is found active in the blood. The elimination of the bacilli from the blood, or the complete agglutination of the same, leads to a complete disappearance of the diazo reaction even though the fever exists. At the same time the Widal reaction is positive. In typhoid cases which have been treated with salol and calomel, the above relation is not maintained, in that a typical diazo is not present even though bacteriemia exists.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

Absorption of Typhoid Bacilli in the Immune Animal.—T. H. Buxton (*Jl. of Med. Research*, Vol. XVII., No. 2).—This eighth part of Buxton's researches on the absorption from the peritoneal cavity, leads to conclusions that are exceedingly interesting, and also important for certain phases of the process of immunization. He has found that a rabbit immunized against typhoid bacilli does not dispose of a not lethal dose of living typhoid bacilli more quickly than a normal rabbit. It does not become appreciably more resistant to the endotoxins. The immunity probably resides in the increased capacity of the phagocytes for taking up bacilli. The endotoxins, therefore, on the destruction of the bacilli in the immune animal, are liberated chiefly into the cellplasma of the phagocytes, instead of directly into the body fluids, as in the normal rabbit.

The influence of the opsonins upon the bacilli is limited to the effect that they become more acceptable to the macrophages. Indirectly, however, the opsonins protect the immune animal, since, as said before, the endotoxin does not enter into the body fluid, but is formed and most likely destroyed within the body of the phagocytes. This reasoning appears highly logical and justified, and may serve to give a closer insight into the working together of the various immune substances. The point that has not been settled, in all the opsonin work, is the question of the difference between antibody-loaded bacilli and antibody-free bacilli. The influence of attachment of antibodies to bacteria ought to be studied in regard to their capacity for being taken up by phagocytes. The question whether intact bacteria can be phagocytosed has not been definitely determined. After all the opsonic action may be only eliminatory of detritus.

On Serum Anaphylaxis in the Guinea-pig.—P. Gay and E. E. Southard (*Jl. of Med. Research*, Vol. XVI., No. 2).—Gay's and South-

ard's work on a very puzzling phenomenon, first discovered by Theobald Smith, and then more closely studied by Otto, in Germany and Rosenau and Anderson in our country, has led to a better understanding of its nature. The phenomenon itself, that probably has a bearing on methods of serum-therapy, may be concisely described first: the injection of any convenient amount of horse-serum, subcutaneously or intraperitoneally, in normal guinea pigs, produces no ill effects. If, however, guinea pigs are given a very small dose of this serum (0.001 to 0.1 cc.), and ten days or two weeks later are again injected with a larger amount (5 cc.), they will die almost invariably within an hour. Phenomena analogous to this have been observed before in animal experimentation; Otto and Rosenau pronounced the action of small doses as sensitizing, while larger and repeated injections were said to cause immunity. The authors have closely investigated the subject, studied the anatomy of the lesions, and altogether exhausted the methods of research and inquiry. While a detailed review of the methods and experiments would be impossible, it must be said that the trend of the paper allows of no doubt of their correctness, and is a justification of the conclusions in which they sum up their results. These are as follows: The well-known susceptibility to intoxication by horse serum, which is demonstrable in guinea pigs previously injected with horse serum, is due to the non-neutralization and non-elimination by the animal body of a factor in the serum, for which they suggest the name anaphylactin. The intoxication caused by the second injection depends upon other substances than the anaphylactin. This factor corresponds to the constituents of the serum eliminable by the animal body. The reaction of intoxication would seem to be a cellular one dependent upon the heightened power of assimilation on the part of cells which have been subjected to the anaphylactic substance over a definite period of incubation. The tissues of guinea pigs, during the anaphylactic phase, show no demonstrable lesions. Striking multiple hemorrhages, for some reason undescribed, accompany the toxic phase. The hemorrhages are more frequent in the stomach, cecum, lung and heart than elsewhere. Microscopic study demonstrated that the hemorrhages are largely associated with widespread fatty degeneration of the endothelium. The heart muscle, voluntary muscle, the peripheral nerves and the gastric epithelium show striking fatty changes which are independent of the vascular lesions. The task of the anaphylactin is apparently to prepare various cell structures so that their contained fat is made to flow rapidly together upon exposure to the toxic agent. The rapidity of this degeneration is striking, though it presents histologically the features of so-called chronic degeneration. The fact that animals receiving large injections of horse serum successively at intervals of several days do not show symptoms of disease, is not due to immunity produced by the injections. If such animals are injected again after a longer period (several months, sometimes) they will succumb with the same symptoms and lesions as the animals sensitized by an initial dose. The presence of anaphylactin in such seemingly refractory animals can be demonstrated by the injection of this serum into normal guinea pigs, that will succumb on subsequent injection to the intoxication. The period of incubation in producing sensitiveness is longer than the time that is used for the successive massive injections.

Observations about Natural Tumorresistance in Mice.—M. Haaland (*Ber. Klin. Wochenschrift,* 1907, No. 23).—While it is to the credit of Ehrlich to have demonstrated the possibility of increasing the virulence and growth of mouse-carcinomata to such a degree that no more failures occur in the inoculations, which with primary tumors is the rule, his explanation of this phenomena by the assumption of an atreptic immunity, cannot be accepted for the phenomenon that Haaland has observed in his experiments. It was known before, that the different breeds and races of mice differed greatly in their susceptibility to inoculation; that certain tumors would only grow on one race and never on others. Jensen's tumor is the first instance, or the first observation made in this direction, and confirmed later in many cases. Haaland gives his experience in this line; his investigations, however, went farther. A sarcoma of a virulence that reached regularly 100 per cent of the inoculations, obtained from Ehrlich and thoroughly studied at the latter's laboratory, was brought to Norway. Inoculation of mice of Norwegian origin was absolutely unsatisfactory. In consequence, a supply of mice of the race used in Ehrlich's work, was sent by Ehrlich to Haaland. Control inoculations of these mice were made in Frankfort and in Christiania. While in the former results were always positive, the results in the latter were nearly negative, although the same method was employed in both. While the difference in the results of the inoculation of tumors in mice of different breed or race may be explained by a difference in the qualities of the inoculated cells, or by the constitutional condition of the animals, Haaland has shown by numerous experiments that the latter factor plays the principal part. On the other hand, the observation of the refractivity of the Frankfort mice when brought to Christiania cannot be explained by constitutional qualities. Close investigation proved that no error of experiment was at the bottom of the failure. The only factor that varied in both cities was the food and the way of keeping the experimental animals. As mice in Frankfort, of the breed of one and the same mother, succumbed to the tumor, the others, from the same breed, remained free from the growth in Christiania, the difference must be due to circumstances, given by the changed surroundings and nutrition. Investigation in this direction is going on now. Other observations show that not only constitutional or external or nutritive conditions influence the susceptibility of a mouse, but that there are differences also in the single individual. Young mice are more susceptible than old mice; sick or undernourished animals do not give positive results, or at least the condition interferes greatly with the growth of the tumor. According to Ehrlich's views the condition would be due to a battle between the tumor cells and the tissues for nutritive material. Similar conditions are the rule in trypanosoma infection of the rat, where a pregnant female is immune to the infection, a fact that the reviewer has frequently observed. An analogous instance in human pathology is the fact frequently observed, that during pregnancy an existing tuberculosis remains more or less stationary, to become rapidly progressive after the pregnancy is terminated. It is evident that all these data apply as well to the primary tumor. Certain constitutional or

other conditions may persist in certain races, as has been demonstrated for the mouse carcinomata. Observations and statistics from human pathology would fall in line with this way of accounting for the so-called heredity of tumor formation.

Metastatization of Histologically Benign Tumors.—R. Borrmann (*Zieg. Beitraege,* Vol. 40).—Borrman's paper is a valuable additional proof that destructive and metastatic growth of tumors is not dependent upon a certain type of cells, but is principally an inherent characteristic of all genuine blastomata. This case of a malignant subcutaneous haemangioma is a very important parallel to the cases of metastatic leiomyomata and chondromata reported by others. The history of the case is, briefly, as follows: A subcutaneous haemangioma, in a woman 26 years old, was removed, followed by a recurrence after four weeks. In spite of several other operations metastatization took place and the patient died from multiple metastases in the lungs. It was very remarkable that the primary tumor as well as the metastases showed histologically only the typical structure of a simple angioma. The only unusual finding was an ingrowth of the connective tissue into the vascular structures, analogous to the phenomena observed in the benign intracanalicular fibroadenoma of the breast. Irregularity of the connective tissue growth was seen in no place; none in the cells of the vessels themselves. Nowhere immature, undeveloped cells could be observed. Borrmann's observation is significant in the highest degree. It alone does away with the assumption of a character of cells of malignant tumors physiologically, morphologically and biologically different from that of normal cells. It, too, falls in with the contentions of Ehrlich, that tumor growth is only the effect of a difference of nutritive capacity or avidity of body cells on the one hand, and tumor cells on the other. If they are present in sufficient potency, every tumor can form metastases and become malignant.

Variations in the Structure of the Endometrium and So-Called Chronic Endometritis.—A. Theilhaber (*Muench. Med. Woch.*, 1907, No. 23).—To the pathologist the name of glandular and interstitial hyperplastic endometritis has been for a long time objectionable. The fact is that these so-called endometritides are mere hyperplastic conditions, and only seldom show evidence of any form of inflammatory change. The name has been used because most mucosa examinations have been made for obscure uterine or other pathologic conditions. Normal mucosae are seldom seen. Autopsy material is usually in a condition unfit for the demonstration of finer histologic changes. Theilhaber has succeeded in obtaining material from one hundred females (including children), many perfectly healthy during their whole lives, and others suffering from certain disturbances like leucorrhoea, etc., after abortions, during the different periods of the menstrual cycle. In all of them numerous cases of hyperplasia were found in the healthy individuals very frequently, without the history of uterine disease throughout the whole course of the life. It was established that the normal

mucosa varies greatly in thickness, the number of glandular structures and in the character of the stroma. Pictures of glandular hyperplasia, where the stroma was reduced to a thin lamella between the single glands, were observed in persons in perfect health. So-called atrophic conditions and increase of the interstitial tissue are frequently found in normal individuals, and are nothing but a physiologic alteration of age. Only in gonorrhoeic uterine infection may be found a chronic interstitial endometritis characterized by the presence of many pus cells within the stroma. Endometritis glandularis does not exist; endometritis interstitialis is not present in ordinary cases of discharge (leucorhoea). The hyperplasia is not inflammatory in character, but caused by other influences mostly by disturbances of the circulation in the myometrium (fibroids, excesses in venere, psychic disturbances). Lack of active circulation in chlorosis and anemia may be at the bottom of this condition. The name of hyperplastic (or hypertrophic) endometritis ought to be discarded.

DIAGNOSIS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

UNUSUAL CASES OF PERNICIOUS ANEMIA.—Gulland (*British Med. Jl.*, 1907, No. 2).—The writer believes that pernicious anemia is becoming more frequent, having seen 37 cases within the last year. The view, frequently expressed, that the disease consists of a rapidly progressive anemia, soon ending fatally, is certainly false. Many cases run a very chronic course, and often the anemia itself occupies a very subordinate place in the symptom complex. The writer believes that pernicious anemia is due to a toxemia of diverse origin that may affect in various ways the blood, the hematopoietic organs, the nervous system or the gastrointestinal tract. Thus there are cases that present the clinical picture of amaurosis, peripheral neuritis or tabes dorsalis. Sometimes the most striking features consists in aphasia, or in epileptiform attacks. It is not at all unusual to have gastrointestinal disturbances occupying the foreground of the symptomatology, and sometimes leading to the diagnosis of gastric cancer, since in both cases the gastric juice may contain no hydrochloric acid. Occasionally psychic disturbances may be so outspoken that the patient is sent to an asylum for the insane. The chief point in the diagnosis of pernicious anemia is the existence of a high color index. If the first two figures of the red blood corpuscle count are multiplied by 2, and the result divided by the percentage of hemoglobin, a figure is obtained in pernicious anemia varying from 1.1 to 1.4, whereas in secondary anemias the index is usually under 1. The stained blood spread also offers a more or less characteristic picture. The author's treatment in general coincides with the well-known procedure advocated by Grawitz. Arsenic often does good, whereas iron is positively harmful.

The value of the very interesting article consists in a portrayal of the clinical difficulties that often surround the correct diagnosis in cases of pernicious anemia.

Profuse Hemoptysis Due to Mitral Stenosis.—Schwartz (*Muench. med. Wochenschr.*, 1907, No. 13), reports an instructive case in which profuse pulmonary hemorrhages led to the diagnosis of phthisis. At the autopsy mitral stenosis and a marked sclerosis of the pulmonary artery were found. There were no emboli or infarcts, the bleeding having been apparently due entirely to passive congestion.

Auscultatory Blood Pressure Determination.—Fellner and Janowski (*Muench med. Wochenschr.*, 1907, No. 21).—At a meeting of the German Congress for Internal Medicine, B. Fellner described a convenient method of determining the systolic and diastolic blood pressure. The usual Riva-Rocci armband with mercury manometer, etc., is used. While the upper arm is being compressed by means of the armband, the observer auscultates by means of a stethoscope placed over the cubital artery, best in the bend of the elbow. When the compression of the upper arm has reached a certain degree, a systolic murmur can be heard over the cubital artery. This murmur persists as the compression of the upper arm increases, until a point is reached at which it suddenly vanishes. The pressure at which the arterial murmur appears, and at which it ceases, are carefully noted. Comparison with various other methods, especially with the excellent one of Recklinghausen, have shown that the arterial murmur appears when a compression corresponding to the diastolic pressure has been reached, and that the cessation of the murmur corresponds to the systolic blood pressure. In the discussion, Janowski pointed out that a similar method had been described two years ago by Korotkow. Janowski, too, considers the method trustworthy. If further experiment confirms the views of Fellner and Janowski, a most convenient and simple method of estimating systolic and diastolic blood pressure will be at the dispoal of clinicians.

Dicrotic Pulse in Aortic Insufficiency.—Janowski (*Zeitsch, f. klin. Med.*, 1907, Nos. 1 and 2).—It is generally believed that a dicrotic pulse is never found in uncomplicated aortic insufficiency. When found in this condition it nearly always indicates the coexistence of a mitral regurgitation. Janowski, however, publishes a number of pulse tracings showing that a double aortic and mitral insufficiency need not produce a trace of dicrotism. On the other hand outspoken dicrotism may appear in patients with pure aortic regugitation, especially in febrile conditions less often in heart-failure, Graves' disease or under the influence of amyl nitrite. The presence or absence of dicrotism does not, therefore, allow any conclusions as to the coexistence of a mitral lesion in cases of aortic insufficiency.

Six Cases of Perforating Duodenal Ulcer.—Gray (*Scot. Med. & Surg. Jl.*, Jan., 1907).—The writer emphasizes the view, held by many

other surgeons that duodenal ulcer is far more common than is generally supposed. If often produces no disturbance of any sort, until perforation occurs like a bolt from the blue. The typical clinical picture consists of pain to the right of the median line, occurring several hours after taking food, and relieved when the next meal is taken. There is hyperchlorhydria, cryptic bleeding and tenderness to pressure just below the region of the gall bladder. Any or all of these symptoms may, however, be absent. Chronic perforation, with or without the formation of a subphrenic abscess, is not rare. Acute perforation my simulate appendicitis.

THERAPEUTICS.

IN CHARGE OF

WILLIAM ENGLEBACH, M. D.

X-RAY TREATMENT IN DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.—Pancoast (*University Penn. Bulletin,* Vol. XIX., No. 11, Ref. *Jour. Med. Science,* 1906) recently published his own observations and reviewed the literature on the subject up to date. He found that 63 cases of leukemia reported treated by the x-ray. Of these only 4, or 6.35 per cent, were still alive three to six years after the primary symptomatic cure. He assumed that it was safe to assert that this small percentage of cases in which the duration of diseases was prolonged, would not be much altered if the final report of all cases treated with the x-ray were at hand. In 39, or over 70 per cent of those that died, or were, at that time in a critical condition, there had been a marked amelioration in the symptoms, or a symptomatic cure as a result of the first treatment by the x-ray. In view of these results he considered that the Roentgen rays could hardly be held a specific in leukemia; in fact, that the effects of this treatment were not very encouraging. He further asserted that the danger attending the use of this treatment should be remembered, and the evidence of toxemia looked for. Frequent urinary examinations should be made to determine the extent and rapidity of tissue destruction, and the state of the kidneys. He said that there was clear evidence that death had been caused or hastened by the failure to observe these points. Regarding the treatment of pseudo-leukemia, he said that a cure lasting for at least three or four years may be obtained in 25 per cent of the cases treated; (2) that in almost all instances not cured, life was prolonged during a period of comparative comfort by improvement of the general condition, and pressure symptoms were relieved; (3) that no other agent would yield such good results, and (4) that a better understanding of the effects of this treatment could be expected. The treatment of polycythemia by the x-ray treatment is considered unfavorable. Twelve instances of splenic anemia have been collected by him, in which improvement had been noticed. The x-ray treatment of pernicious anemia, or even subjecting the patient to exposure, was a dangerous procedure in the presence of any evidence of toxemia.

Treatment of Severe Cases of "Enteroptose."—Strasser (*Med. klin. Woch.*, No. 99, 1906) has his patients lie in the dorsal position during a number of weeks, raises the spine by placing a cushion under it and "loads" the abdomen by means of a bag filled with shot or sand. This bag is placed in a half-moon manner over the lower part of the abdomen, and the bulk of its contents distributed evenly, or unevenly, so that larger quantities are distributed on both sides, in the middle, or only on one side, according to indications. The length of the bag is about 40 cm., its breadth 8 or 10 cm., and its weight about 3 kg. The bag is kept on all day, and, if possible, also over night. Strasser claims to have had good results with this "load therapy" in the treatment of the severest cases of enteroptosis.

Further Information to the Knowledge of Enteroptosis, and to the Application of "Glenard's Belt." Post Scriptum Regarding "Orthotic Albuminuria."—Aufrecht and Kaufmann. (*Ther. Monatsh.* No. 3, 1904).—Aufrecht clings to the idea that the "nephroptosis is the beginning (preparatory stage), and preparatory condition of enteroptosis," the symptoms of which associate themselves to the former in a changeable manner. The stomach, often already dilated, descends. There are eructations, vomiting, gastralgia, and anorexia. One can feel the pulsations in the epigastrium, and can palpate the ptotic liver. To this are added ptotic appearances of the genitalia, fatigue in the lower extremities, cardiac uneasiness (due to phrenoptosis), and manifestations of other diseases which seem to be of nervous origin. These symptoms are classed by those authors, who have not occupied themselves with the study of enteroptosis, in the class of hysteria and neurasthenia. Glenard's belt has been the most efficient means in the hands of the author. Its effect is not merely to obtain a redressment of the ptotic organs. He produced a reduction in size of the abdominal space in a direction from below upwards, which is sufficient for the improvement and even for the disappearance of subjective sensations. Improvements made by Glenard on his belt, which only make it more expensive, are thought to be unnecessary by Aufrecht. Aufrecht himself has made some modifications, but has not been able to overcome the defect of lateral pressure in women with very prominent hips. Glenard's belt might also be valuable for pregnant women, after puerperium, and for ventral hernia. Another indication for the use of Glenard's belt may be its use in cases of orthotic albuminuria, if the attempts made by Aufrecht, prove successful. He reports two cases with encouraging results. Aufrecht believes that in these cases we have to deal with a disease of individual kidney glomeruli due to the milder influences of infectious diseases. As soon as the back flow in the renal vein has become difficult, which is brought about by assuming the erect posture, albumen passes through the capillaries of the glomeruli. It might be possible that a ptosis of the kidneys will overcome the difficulty of the back-flow, and in such cases Glenard's belt may eventually bring about improvement.

Shall We Treat Fever?—Kraus (*Ther. d. Gegenwart Ref. Ther. Mon.*, June, 1907) after a historical review of the subject, investigates the cause of fever. He says late research instead of clearing up the

phenomena of abnormal temperature, has made this matter more complex. Fever is the reaction of the organisms to substances from outside introduced into it, and also the production of the antitoxins within the organism. The harmful or helpful effect of febrile temperature cannot be considered from one point of view. It is clear that it is not exclusively helpful. For this reason antipyretic is, theoretically speaking, justifiable. A moderation of the fever itself without influencing its final result is desirable. The author recommends quinine, antipyrin, and hydrotherapy. He lays special stress upon the "nerve quieting" effect of these means, which were also much praised by Liebeomister. He says that moderate antipyretic treatment is indicated in numerous febrile conditions.

The Effect of Drugs on the Uterus.—Cushny. (*British Med. Journal,* Nov. 24, 1906; Ref. *Ther. Mon.,* June, 1907), has investigated the effects of different medicines on the uterus of living animals. The animals, rabbits and cats, were anesthetized, and the abdomen opened while the animal was submerged in normal saline. The movements of the uterus were definitely recorded by means of levers. The drugs were then introduced into the jugular vein. Different animals reacted unequally, and there was a difference in the gravid and the non-gravid uterus. Nicotine produced contractions of the non-gravid uterus in the rabbit, while in the cat atony was produced. In the gravid uterus of both animals marked contractions occurred. Stimulation of the hypogastric nerve caused atony in virgin cats, while in the multiparous and gravid cats contractions of the uterus were produced. The author explains this by saying that this nerve contains inhibitory and acceleratory fibers. During pregnancy, the latter predominate, i. e., the uterus becomes so sensitive that the influence of the inhibitory fibers is neutralized. Similar effects were observed from adrenalin. Atropin had no apparent effect on the normal uterus, on the contrary, it counteracted the effect of pilocarpin, which in both the virgin and the gravid uterus, produced violent contraction. Quinine had the same effect as pilocarpin, but its effect was not influenced by atropine. Aloin given in fresh form, had no effect. Ergotin produced strong contractions, lasting several minutes, after which the uterus remained sensitive for some time. The contractions were short and continuous in some of the experiments, in which cases small doses of the preparation caused paralysis of the hypogastric nerve. With other preparations of ergot, large doses were required. The author supposes that there are two substances in ergotin, one of which produces contraction by direct stimulation of the uterine muscles, the other causing paralysis of the intermuscular nerve endings.

Serum and Organotherapeutic Preparations (*Centralblatt f. Gesammp. Ther.,* June, 1907).

Antiglokusine: An acid extract of the mucous membrane of the duodenum. It forms a thick, light brown liquid, which possesses the property of stimulating the pancreas, and is supposed to be indicated in diabetes.

Deasyme: A liquid which possesses as its main quality the amolytic ferment of the secreting glands of the digestive tract..

Serum for Eclampsia: It is composed of sera of animals which have been treated either directly with fresh or dried placentas of eclampsia patients, or with aqueous alkaline or slightly acid extract of such placentas. Its administration depends upon the preparation.

Serum for Meningitis: Obtained from serum of horses inoculated with virulent bacilli of meningitis. It is administered hypodermically in 10 cc. doses.

Deprine: It corresponds to the glycerine emulsion of tuberculosis, the bacillus Hansen being used instead of the bacillus tuberculosis. It is given in 10 cm. doses subcutaneously.

Ophthalmot: It is made from the glands of the fish "cobitis fossilis," by extraction and distillation, with 10 parts oleo amygdalolium dulcorum. It is indicated in granulosae.

Oxypepsin: Made from the culture of sputum of tuberculous patients, having high fever, (by oxidation by means of hydrogen oxide). Indication for its use is tuberculosis. It is given in doses up to 20 cm. subcutaneously.

Staphylase Doyen: It is an antistreptococcus serum in the form of a bromide and iodide.

Tannosplenoferrin: it is obtained by macerating in water the dried and pulverized spleen of cattle, and treating the filtrate with chemic acid. producing a granular rust-brown powder. It is given in anemias.

Tetanus Antitoxine: It is used in solid and liquid form. The solid when tetanus is active, the fluid for prophylaxis.

Tubercle-Protein: It is a preparation obtained frum tubercle bacilli, with the aid of hydrogen peroxide. It is employed to obtain a high degree of immunity .

Tuberculin Denys: It is a glycerine suspension culture boullioun ot human tubercule bacilli. It is on the market in pure and diluted form.. It is used like Koch's tuberculin.

Tuberculosis Ontieopine-Marigliano: A powdered coagulum of blood of animals immunized to tuberculosis. It is given in daily doses of 4 gm. per os.

SURGERY.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Consequences of Cranial Injuries.—Cushing (*N. Y. Med. Jour.*, Jan. and Feb., 1907).—The paper covers in an interesting way, the various forms of intracranial hemorrhage and the operative measures of relief, the physiologic phenomena of compression, the question of choked disc in traumatic cases, the recent views of cortical localization and methods of eliciting cortical reaction, and of the late consequences of cranial injury, as pulsating exophthalmos, epilepsy and traumatic neuroses. Cushing believes in the mechanical as opposed to the toxic views in regard to the

formation of choked disc. The delicacy of the eye grounds permits the evidencing of the stages of acute intracranial tension which are a great aid in indicating the intracranial circulation disturbance, and also in determining the side of the compression.

In cases of acute increase of intracranial tension, the compression symptoms are due to disturbances of intracranial circulation which progress from an early compensative degree of venous stasis up to an actual arterial anemia, the effect of which can be overcome for a time by a compensatory rise in arterial tension, and it is shown experimentally that this reaction hinges on the reaction of the vasomotor center, which through constriction of the splanchnic field, increases blood pressure to the point at which arterial blood once more finds its way in sufficient amount through the medullary vessels, and so long as the systemic arterial tension is capable of holding at its increased level without wavering, and so long as the respiratory rhythm remains unaffected, just so long may we safely delay intervention. That is, that when the third stage of Kocher has been reached, when stupor has deepened, so that the patient no longer can be roused, when the slow vagus pulse begins to be replaced by one with occasional rapid periods, when the blood pressure becomes irregular, and the respiration rhythmic, then it must be recognized that death is near at hand owing to exhaustion, primarily of the vasomotor center. For traumatic cases, which are so obscure that localizing symptoms do not present, but where decompression is indicated, the author uses the intermusculotemporal operation in which the skull is opened about as is done in his Gasserian ganglion operation.

In all cranial surgery a tournique is recommended; also an artificial respiration apparatus, the one to prevent a loss of blood which would be dangerous later when the high pressure has fallen after operation, the other to continue the breathing in cases where the respiratory center has been put out of action by the loss of blood and the anesthetic.

In dealing with traumatic epilepsy he feels that the chance of permanent cure is not good (although in 49 cases he has had 13—26 per cent.—who reported themselves cured). In a majority of the cases the seizures are greatly lessened in intensity, and a gradual lessening of the attacks in number and severity is considered a more favorable sign than an immediate post-operative stopping. Early cases are expected to be benefited in a much greater degree. He further states that he believes it is better in those "border line" cases which would "recover" without operation that those that are operated upon do the best, not only immediately, but their later careers are freer from "cerebrasthenia," from epilepsy and from insanity. In basal fractures the injury is most frequently to the middle fossa, and a decompressing operation either single or double will allow the partial if not complete removal of the blood clots that later give rise to dense adhesions.

Surgery of the Thyroid.—Ferguson (*Med. Herald*, May, 1907).—He believes that surgical intervention in all but exophthalmic cases should only be followed after other methods have failed to relieve the patient of symptoms incident to the enlargement. In 300 cases he found that thy-

roidectomy was done for dyspnœa in 77 per cent., for deformity in 24 per cent., dysphagia in 8 per cent., tracheal stenosis in 3 per cent., for malignancy in 2 per cent. In a third of the cases a multiplicity of signs and symptoms was the indication. He gathers from Kocher's work the importance of the condition of the cardio-vascular system in determining operation, and seconds the sound advice of Kocher, not to operate in Graves' disease as a last resort. Kocher's exophthalmic cases operated numbered 176 with a 5 per cent. mortality; 158 were traced after operation, 81 per cent. were cured, 7 per cent. greatly improved, 10 per cent. improved and 2 died. The mortality in other hands is 15 per cent., 8.66 per cent., 28.5 per cent. Ferguson has operated on 58 cases, 44 simple or cystic goitres, without a death, 12 exophthalmic cases with 4 deaths, and 2 malignant cases. Eight of the exophthalmic cases were cured. The simple cases may have the wounds closed, but in exophthalmic or malignant cases the wounds are drained with rubber tissue wicks.

Plastic Resection of Mammary Gland.—Warren (*Ann. of Surg.* June, 1907).—The incision of Thomas below the gland is modified so that it runs upward and outward along the axillary border, being hidden later from view by the breast falling over it. The gland is turned upward and inward after separating the fascia which covers the posterior surface of the breast from the deep pectoral fascia which covers the muscle, and the whole of the back of the gland is in view for exploration or partial excision. A V-shaped portion of the gland is removed with a benign tumor or cyst and later closed with fine catgut. Several such sections can be removed, but in numerous small cysts it is only necessary to incise them with radiating incisions, which need not be brought together with suture as they fall in place when the gland is laid back on the chest. "Shelling out" of solid tumors is impossible and should not be tried. In case of malignant disease the complete operation can proceed, after taking precautions that none of the cancerous tissue has been distributed in the wound. The wound is closed and dressed with a binder of such a shape that it gives lateral support as well as compression. There is slight risk or discomfort for the patient, there is no disfigurement, and it is a very satisfactory substitute for the disfiguring incisions in the front of the breast.

Surgery in Diabetes.—Wiener (*Med. Record*, May 4, 1907).—We must distinguish between diseases due to diabetes, and those that occur independently of the disease. All necessary operations for diseases not due to diabetes should be performed just as in ordinary patients. The abnormal products (acetone, diacetic acid, oxybutyric acid, lactic acid) which circulate in the blood in diabetes do harm, (a) by injuring the tissues and making them prone to infection; (b) by acting as contributing factors in producing premature arteriosclerosis. Arteriosclerosis plays a very important role in producing diabetic gangrene. There are two kinds of diabetic gangrene: (a) that caused by changes in the arteries and veins; (b) that caused by the effect of virulent bacteria on weakened tissue. We should always endeavor to transform wet gangrene into

dry gangrene. If more than three toes are affected, especially if there is any cellulitis, a high amputation is generally indicated. If the infection is progressive, a high amputation should be done. If in doubt about the site of amputation, a high amputation will give the best results. If more than one gram of ammonia is excreted in twenty-four hours, operation had better be postponed until by careful diet the amount of ammonia is considerably reduced. The prognosis does not depend on the percentage of glucose in the urine but on the degree of acid intoxication. A strict meat diet will reduce the amount of sugar, but it will often bring on fatal coma by increasing acidity. Sodium bicarbonate given before and after operation can do no harm and may do good. Ether and chloroform should be avoided as much as possible. All operations on diabetics should be performed as simply and as rapidly as possible.

ORTHOPEDIC SURGERY.

IN CHARGE OF

NATHANIEL ALLISON, M. .D.

WEAK FOOT AND ITS TREATMENT.—Keppler (*N. Y. Med. Jour.,* June 8, 1907).—As a prophylactic measure, the author strongly advises the wearing of correct shoes, and points out the evil results of improper footwear. When the foot is weakened, and gives rise to symptoms, the employment of active exercises is indicated. Adduction and dorsiflexion, rising on the toes, followed by strong manipulation, should be employed. For more advanced types, the author recommends the use of an apparatus known as the Krunkenberg pendulum machine, which throws an increasing amount of muscular work on the foot, and relieves severe cases. As adjuvants, he recommends hot baths, massage and vibration. He advises also the use of the Whitman plate, where artificial support is necessary; this plate does much to correctly train the act of walking. A wrong arch-support does more harm than none at all. Operative interference is indicated in only the severe and selected cases, though manipulation and reduction under an anesthetic has a definite place.

OPEN-AIR TREATMENT OF TUBERCULOSIS BONE AND JOINT DISEASE.—Carling (*N. Y. Med. Jour.,* June 8, 1907).—The author strongly advocates the open-air treatment of cases infected with tuberculosis, whose bones and joints have become involved. As a majority of these cases were seen among the children of the poor, he urges the necessity for recognition on the part of the municipal government of the great good that may be accomplished by the maintenance of open-air sanatoria, drugs are not necessary except in case of emergency. Good food, fresh air and the proper surgical treatment, are all these children need in order to make a recovery.

Internal Derangement of the Knee Joint, With Report of Cases.—Freeman (*Surg., Gyn. & Obst.*, June, 1907).—No other joint is of more importance than the knee, because it has to support the weight of the body, and because locomotion depends so largely upon its integrity. Temporary stiffness generally follows an operation of any magnitude on the knee, and sometimes persists for months. Operations upon the knee should never be performed without good cause, and then under the most favorable circumstances. The author states that owing to uncertainty of accurate diagnosis in many instances, "internal derangement" remains perhaps the best designation for a certain group of symptoms. Displacements of the semilunar cartilages can usually be made out, and are generally caused by a sudden or forcible twist of the tibia upon the femur, while the knee is flexed. The most prominent symptom is sudden locking of the knee, accompanied by great pain and inability to straighten the limb, although it can often be flexed without great difficulty. The locking may be acute and cause serious disability, or it may occur from ever so slight injuries, and only cause temporary embarrassment. The author believes that acute cases should never be operated upon, but should be treated by massage, applications, and the wearing of a Shaffer brace. Bad chronic cases and those where the brace has failed should be operated upon, always under the most careful surgical precautions. It is not necessary to wait until the fluid contained in the joint becomes absorbed. The operation should be done through a U-shaped incision, lying between the lateral ligament on the one hand, and the patella and its ligament, on the other. The loose cartilage should be pulled out of the joint with a blunt hook, and cut from its moorings with scissors. The soft parts should be accurately reunited with catgut sutures, avoiding unnecessary knots, and a snug bandage and posterior splint applied. The author reports 10 excisions of semilunar cartilages done upon 8 patients,, the results proving favorable in each instance.

Artificial Joint Ligaments of Silk.—Lange (*Munch. Med. Woch.*, liv. No. 17).—By boiling silk in a solution of bichloride of mercury, Lange has discovered that it is not nearly so liable to cause abscess formation when introduced as an artificial ligament, as when it is merely boiled in water. However, it is liable to cause an aseptic secretion. He has overcome this by saturating it with sterile paraffine after it has been boiled. The use of silk as ligaments for paralyzed flail joints, he recommends for patients under twenty years: arthrodesis for those over 20, if they desire it. After the silk has been stitched about the joint, so as to produce an artificial ligamentous support, dressings should not be removed until it has had time to become encased in the connective tissue. Gentle functional use will stimulate the adaptation of the part to the foreign substance. Care should be taken to keep the ligaments stretched, but not to allow them to be pulled out or loosened, before they have firm connective tissue supports. He reports several cases illustrative of this method.

The Treatment of Rigid Flatfoot by Excision of the Scaphoid.—Legg (*Boston Med. & Surg. Jour.*, June 6, 1907).—When a rigid foot ex-

ists, with a displacement of the scaphoid, Legg recommends the excision of that bone. The operation is a simple one, and is done as follows: Through a curved incision over the scaphoid, the skin and soft parts are turned back, the bone is enucleated by freeing its attachments to the other tarsal bones. The wound is then closed and the foot corrected and put in plaster of paris. In the majority of his cases, the author has sutured the remaining joint capsules of the astragalus to that of the internal cuneiform, in order to better hold the corrected position. The tendons of the peronei and in some cases the tendons of the tibialis anticus, extensor proprius hallucis, and extensor longus digitorum, should be divided in order to fully correct the valgus. The after-treatment is of chief importance. Plaster should be kept on for three or four weeks. As the patient resumes his shoe, care should be taken that the foot does not relapse into valgus. This may be prevented by a carefully fitted plate. Crutches should be used at first, and the patient gradually accustomed to walking with the foot in the correct position. Massage, manipulation and exercises designed to strengthen the foot, should follow. The plate must be worn five or six months.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

ACUTE DIFFUSE GONORRHEAL PERITONITIS.—Goodman (*Annals of Surg.*, July, 1907).—After a resume of the literature on the subject, and a consideration of the conditions, the writer gives the following conclusions: Diffuse gonorrheal peritonitis is a serious and sometimes fatal malady, which, if not corrected by operation, is likely to leave a legacy of pustubes in the female, already doomed to sterility, and possibly lasting invalidism. Diffuse gonorrheal peritonitis may recover under palliative or symptomatic treatment alone, but we must continue to operate upon some of the cases, with reasonable assurances of recovery. The number of cases of gonorrheal peritonitis operated upon will be diminished when we have the means of making a positive diagnosis as to the bacteriological character of the infection, or when a satisfactory antigonococcicic serum shall be at our disposal. It is hoped, however, that the discussion occasioned by this report will enable us to bring to light some more clinical data which will help us to outline definitely the course to pursue in cases of suspected acute gonorrheal peritonitis. The gonococcus is capable of producing a local or a diffuse peritonitis, without the presence of other pyogenic bacteria.

A CASE OF SARCOMA OF THE BLADDER.—Whiteside (*Amer. Jour. of Urol.*, June, 1907).—The writer reports a case of this rare condition, occurring in a patient, aged 57, who had had bladder trouble for five years, worse during the last year. Frequency, urgency and pain. Had lost 30 pounds in a year; looks aged, emaciated and cachectic. She had fre-

quent vesical hemorrhages. There was considerable tenderness over the whole hypogastric region, and considerable muscular spasm. No growth could be made out by palpation. Bladder capacity 50 cc. Cystoscopy unsatisfactory. Much thickening of vesicovaginal septum. Mucus and shreds of tissue could be washed out of the bladder. Examination under anesthetic discovered a mass in the pelvis the size of a man's fist, probably the bladder. Operation not advised. Autopsy showed the bladder to be filled with a new growth, which infiltrated the bladder wall, but did not involve any other organ. Kidney pelvis dilated and cortical substance in large part absorbed. Ureters dilated. No metastases found in any other organ. Microscopic examination proved it to be a spindle-celled sarcoma.

A New Method of Performing Perineal Prostatectomy.—Hill (*Med. Index-Lancet,* June, 1907).—The author proposes, with the following technique, to overcome the necessity for incising the membranous urethra and its surrounding muscle, the compressor. A Roser's sound is first introduced into the bladder; an inverted V-shaped incision is made with the apex in the median line. The sphincter ani is then separated from the perineal center, and the finger introduced beneath the triangular ligament up to the apex of the prostate. The sound is then turned around to face the finger, and its point forced out at the junction of the prostate and the urogenital trigone The sound is then withdrawn, the finger introduced through the puncture into the prostatic urethra, and the prostatic lobes loosened and removed in two parts. A tube is inserted into the bladder for drainage, a small amount of gauze packed around it, inside the prostatic capsule. The sphincter ani is reattached to the perineal center, and the wound partially closed, the tube emerging through the left lower angle. The writer finds with this technique, that disagreeable feature of many perineal prostatectomies, viz., incontinence, is overcome; that the patient has good control within a day or two after the removal of the tube, all the urine passing through the urethra after the ninth day, and healing takes place rapidly.

The Treatment of Infectious Pyelonephritides.—Juy (*Amer. Jour. of Urology,* June-July, 1907).—After a thorough consideration of the subject, the author gives the following conclusions: Simple infectious pyelonephritides can usually be cured by sufficiently prolonged medical treatment. It is consequently necessary to look for the symptoms in order to make as early a diagnosis as possible. It is by a systematic examination of the ureter in its abdominal course, as well as in its passage through the pelvis, that pyelorenal infections are to be detected. The painful points (subcostal, paraumbilical), the sensation of a large and painful ureter ascertained by vaginal examination, painful spots on the prostatic cornuæ, uretero-vesical and pyelo-vesical reflexes, associated with pyuria and nocturnal pollakiuria, form a clinical complex described by Bazy, which will allow one to make sure of the existence of a pyelonephritis. Medical treatment includes hygienic measures and diet. As long as pus-cells are present in the urine the patient should be kept in

bed on an absolute milk diet. Balsams may be useful, but, at the present time, there is a tendency towards the use of internal antiseptics; salol and especially urotropin and helmithol have given really remarkable results. And lastly, in certain cases, the medical treatment is to be completed by hydrologic medication. The amelioration and cure of simple pyelonephritides are announced by the disappearance of the painful points along the ureter, the cessation of the nocturnal pollakiuria and pyuria. In the pyelonephritides with distention, the indication for operation is, above all, furnished by changes in the general health, the persistency of the pyuria and the increase and size of the kidney. All surgical interference in cases of septic retention should be preceded by an examination as to the functional value of both kidneys. In the first place it is useful to study the total urinary depuration by the classical procedures, such as distological and chemical examination, cystoscopy, etc. These procedures are afterwards applied to the study of the urine coming from each kidney, collected either by ureteral catheterization or segregation. Nephrostomy is the operation of choice in septic pyelorenal retentions. Lumbar fistulæ, which persist, being kept up by an incomplete retention, should be treated by secondary interferences; lateral anastomosis of the ureter to the renal pelvis, resection and transplantation of the ureter, or orthopedic resection of the kidney, will result in a cure. From the progress accomplished in conservative surgery of the kidney, secondary nephrectomy presents very limited indications. The pyelonephritis of pregnancy, on account of its particular evolution, should be treated medically, and surgical interference of the kidneys is only indicated after removal of the fetus. Labor should be induced only in rare exception .

Suprarenal Hemorrhage; An Unusual Cause of Sudden Death. —Munson (*Jour. of Am. Med. Assn.*, July 6, 1907).—A very interesting case of this kind is reported by the author. The patient, aged 25, had been subject to attacks of epilepsy. When first seen, his condition was described as feeble-minded. No abnormalities were noted at the physical examination, except stigmata of degeneration. He failed progressively for five years, when he was described as a filthy, idle idiot, in good physical condition. Seven days before death occurred, he had another attack, and fell. He was put to bed, and it was noted that he had a profuse diarrhoea. The diarrhoea continued and was uninfluenced by treatment. He was able to be up and around part of the time, though he appeared to be growing weaker. A short time before death occurred, he had walked to the bath-room, was given a bath, and his condition was about the same as it had been for several days. A few minutes later, however, he grew very weak, pulse weakened and respiration grew very shallow. He sank into a comatose state, which was shortly followed by collapse and death. At autopsy, hemorrhage was found in both suprarenals.

Suprarenal hemorrhage is common in still-born and very young infants. In young children, the hemorrhage is often accompanied by purpuric eruption, with fever, sometimes convulsions, suggesting an acute exanthem. In adults, the condition is much more uncommon. Males are more commonly affected than females, and the right side than the left.

or, in the case of the not uncommon bilateral lesions, the right side is more extensively involved. Nothing positive is known as to the etiology of the condition. Various hypotheses have been advanced, such as trauma, changes, weakening of vascular wall, stasis and thrombosis of the suprarenal vessels.

The case here presented is one of sudden collapse and death during a severe but supposedly not dangerous enteritis. The patient had for some years been subject to epilepsy. Both suprarenals were completely hemorrhagic, and the other organs showed marked congestion. One is led to believe that death was due to circulatory failure, caused by the sudden removal of the tonus producing secretion of the suprarenal glands.

Tuberculosis of the Testicles.—Keyes (*Annals of Surgery,* June, 1907).—From his observations upon the histories of 100 patients, the writer draws the following conclusions:

1. Testicular tuberculosis is clinically never an isolated lesion. It is only one feature of a general genital tuberculosis. 2. Sterility is frequent if not constant, at the time the first testis is invaded. 3. There is evidence at this time of inflammation of the internal genitals. 4. Relapses in the opposite testicle occur within a few years, in eight or nine out of ten cases, and 5. Such relapses are in no wise postponed by an early removal of the diseased testis. Moreover, though suppuration seems often to result in permanent cure of the local process, and 6. Though a chronic focus several years old is likely never to suppurate, yet 7. In no case can one feel certain of a real cure unless the tubercular epididymitis has been removed. Now, 8. The demoralizing effect of epididymectomy is not to be compared with that of castration, and 9. Slight tuberculosis of the testis may be depended upon to heal spontaneously after removal of the epididymitis. 10. Hence, epididymectomy is the radical operation of choice, unless there is hyperacute generalized epididymo-orchitis, or unless the testis is destroyed by suppuration. 11. This operation has a beneficial effect upon the general health and upon tuberculosis of the internal genitals. 12. It should, therefore, be performed early in the disease. This, in spite of the fact that 13. Tuberculosis of the testis is often but an insignificant part of a generalized progressive tuberculosis, or 14. Is, for many years, the only active lesion of the disease. 15. If the patient is sterile, it would probably be wise to remove both epididymes, even though only one side is diseased.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Phthisis Pulmonum and Abortus Provocatus.—P. J. de Bruine Ploos van Amstel. (*Beitraege zur Klinik der Tuberkulose.* Bd. VII, H. 2).—"*Is pulmonary tuberculosis an indication for the artificial inter-*

ruption of pregnancy?" is the simple question, to which the author of this very instructive paper attempts to furnish "a clear and precise answer." The answer is in the affirmative, and almost a hundred pages are taken up with the arguments advanced by the writer in defense of his position in this problem. The question is considered in all its aspects, including the moral and legal, numerous and extensive quotations are cited from the literature of the world, and each quotation, each cited opinion, is subjected to a sharp critical scrutiny. The final deductions of this essay undoubtedly are based upon a very careful consideration of an enormous material, and therefore, demand the attention of every physician who may be called upon to pass judgment concerning the proper mode of procedure in a case of pregnancy complicated by a pulmonary phthisis.

A study of the laws of most European countries reveals the unsatisfactory condition that in most instances no distinct provisions are made that the physician who performs an abortion for medical reasons in an attempt to save the mother's life is exempt from punishment. The writer advises strongly such changes which will make this point absolutely clear.

In next taking up the purely medical side of the problem, the essayist first endeavors to formulate an answer to the question: *"Does tuberculosis show an untoward effect upon pregnancy?"* Practically all authorities agree that such a harmful effect is exerted. While most writers believe that abortions and premature births are very frequently caused, Ploos thinks that this result is not very common, at least, not in the early stages of the disease.

More difficulty is encountered in furnishing a definite answer to the second question: *"What is the condition and future of children borne by these mothers?"* In a few well authenticated cases children have been born with unmistakable signs of a tuberculosis acquired during intrauterine life. Theoretically a direct germinative infection of the ovum through an infected spermatozoid, like in syphilis, might be assumed, but the existence of this mode of infection never has been established. A placental transmission of tubercle bacilli is possible, but certainly is a rare occurrence. Of greater practical importance is the increased predisposition for infection of children issuing from tuberculous parents, and the increased risk of acquiring the infection by the close association with their diseased parents. A hereditary predisposition for tuberculosis is almost generally conceded. The imminent danger existing for these children of acquiring the infection at home is well illustrated by such observations as made e. g. by Bernheim. In three sets of twins he permitted the respective mothers to nurse one child of each set, while the other was turned over to a wetnurse. All three babies nursed by their own diseased mothers died, while the three others survived.

The essayist comes closer to the main topic of his paper with his third and fourth question: *"Have pregancy, labor and the puerperium a harmful effect upon the course of a pulmonary tuberculosis, and if so, does this fact justify abortus provocatus?"* In general it can be stated that such a harmful influence does exist; it is more pronounced in labor and during the puerperium than in the course of pregnancy. The essayist is

willing to accept Kaminer's *dictum*: "Almost always it means misfortune for a tuberculous woman to become pregnant." A woman predisposed to tuberculosis may develop an acute phthisis during pregnancy, but more often she does in the puerperal state. The practical conclusions to be drawn from these facts are the following: It is the duty of the physician to warn a tuberculous girl against marriage. Ploos regrets the fact that European countries do not possess laws prohibiting the marriage of persons suffering from tuberculosis, and points with envy to the advanced position taken by some of the United States. A married woman must be warned against impregnation by advising facultative sterility. If the physician is consulted after impregnation has occurred, he must inform the prospective mother of the fact that her pregnancy must be regarded as a serious complication of her tuberculosis, and should advise immediate interruption of pregnancy. Since with the advance of both the disease and pregnancy the danger proportionately increases, the indication and justification for artificial interruption of pregnancy are most evident in an early stage of both the disease and the pregnancy. But the indication for abortion undoubtedly also exists in far advanced cases of tuberculosis. If the mother is in an entirely hopeless condition, premature birth may be resorted to in an attempt to save a viable fetus. It may be emphasized that the essayist repudiates the restriction made by some writers to the effect, that artificial abortion should be performed only after a deterioration in the mother's condition has become noticeable. He defends his radical position by his observation that for children of tuberculous mothers the chances to be born healthy and strong are very slim.

The author's fifth question reads: *"Does abortion check that rapid progress of the phthisis for which pregnancy is held responsible?"* The answer is not very precisely given, but if we understand correctly the writer's idea, we would formulate it as follows: Abortion positively checks the progress of the disease in some instances, but it certainly always removes a decidedly injurious factor. Of course, if pregnancy is interrupted very late, the harmful influence was potent for a long time, the patient is in a bad condition and the immediate harmful effect of labor itself may upset the possible beneficial effect to be expected from the interruption of the pregnancy. All these arguments then would speak in favor of early abortion.

The writer finally propounds his last question: *"Which method of abortus provocatus is the least dangerous to the patient?"* Certainly a method which does not call for the use of a general anesthesia. For early abortion Ploos recommends the method of Oehlschlaeger, which consists in the injection of 3 or 4 grams of tincture of jodine into the uterine cavity. This injection, if possible, should be made a few days after the expected menstruation has not appeared. If done in later months, it should be accompanied or followed by a curettement.. An abortion in the third and fourth month requires the instrumental dilatation of the cervix for the introduction of two fingers. The ovum is freed and expressed, then the uterine cavity curetted.

[This essay strongly defends the author's position that in every case of

phthisis every pregnancy should be interrupted as early as possible. Theoretically, he seems right, but "*Is this radical position applicable to practice?*" would seem to be one more important question worth considering. "Almost always" pregnancy does affect the course of a pulmonary tuberculosis, but in some instances this injurious influence is entirely lacking. The interruption of pregnancy in such a case, however rare, could hardly be defended with any arguments. In practice the physician can approach every case of pregnancy in a tuberculous woman with the *theoretical* justification of artificial abortion, but his *actual* justification will be dependent upon the proof that the intercurrent pregnancy does aggravate the course of the disease, and is likely to endanger the patient's life. So that, after all, each case will have to be considered upon its own merits. Our decision, however, will, of course, be influenced by the fact, forcibly brought out in this article, that in certain cases much can be gained by an early interruption of pregnancy.—Editor].

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

INFANTILE SCURVY.—La Fetra (*Amer. Jour. Med. Sci.*, June, 1907), discusses the symptoms of infantile scurvy with illustrative cases. He lays great stress on the fact that the differential diagnosis may be very difficult at times, and calls attention to the following diseases which may cause confusion:

Rheumatism—Rare under two years of age. Almost unknown under one year. In scurvy there is usually no fever or local heat in the swelling part, and the swelling is along the shaft of the bone instead of in the joint.

Rickets—The intense pain, swollen, bleeding gums and tendency to hemorrhage, will indicate scurvy even with coexistent rickets. Proper treatment is also of aid, because the scorbutic symptoms disappear at once.

Arthritis—Gonococcic, septic, or pyemic arthritis must be considered. Diagnosis to be made by careful physical examination, and by the fact that the swellings are rare in the shafts of the bones.

Anterior Poliomyelitis—The gradual development of disability, the enlargement near the epiphysis, the tenderness and the fact that the foot and leg can be moved even though reluctantly, speak for scurvy.

Syphilitic Epiphysitis—The preference of syphilis is for the upper extremities, while scurvy usually affects the lower. Moreover, the characteristic eruption of syphilis is absent, while the bruise-like marks, the petechiæ and the swollen gums of scurvy are present.

Sarcoma of the Femur with Unilateral Swelling—Difficulty in diagnosis may arise, and many cases of this sort have been operated on for sarcoma. The tenderness of the other limbs, together with the swelling of the gums, will correct the diagnosis.

Purpura is to be distinguished by the absence of swelling of the long bones and of tenderness in the shafts of the bones.

Nephritis—Since albumen with blood in the urine may be the first, and for a time, the only sign of scurvy, the diagnosis of acute hemorrhagic nephritis has been made. The feeding history, together with the absence of fever, should make one suspicious. Careful examination will frequently show some of the other signs of scurvy.

Ileocolitis—The absence of fever and of mucus and feces mixed with the blood and the otherwise normal stools will make one cautious about the diagnosis until changes in the legs and gums occur.

In all the above cases if the diagnosis is uncertain the effect of treatment is of the greatest value, inasmuch as the results show in 48 hours, and no harm can be done by waiting that long, as a rule. As the author puts it, "If in doubt, when the baby cries, when the diapers are changed or the stockings removed, stop the sophisticated food and give raw milk and orange juice."

Carbolic Acid Poisoning by Rectal Injection.—Acker (*Arch. of Ped.*, May, 1907) reports two cases of children, aged respectively six and three years, in whom rectal injections of a teaspoonful of carbolic acid to the pint of warm water produced typical symptoms of poisoning with coma and black urine, followed by extreme prostration. In one case the injection was given for seat worms, ordered by the father of the child (not a medical man). In the other case carbolic acid was used by mistake, instead of boric acid, which had been ordered.. In both cases, there was no doubt that the acid was not mixed with water, and being put into the bag of the syringe so that the acid settled to the bottom, the children received the poison with the first ounce or two injected. It is noteworthy that in both cases the toxic symptoms came on within a few minutes of the injection.

Concerning the Use of Dried Milk as an Infant Food During the Summer Months.—Hussy (*Arch. f. Kinderheilk.*, Vol. 46, page 63). —There has been much interest of late in the question of milk dried in vacuo to a powder to which water is added to form a food for infants. It has been shown that this milk powder is practically sterile, and that when properly diluted it approximates cow's milk in its constituency very closely. Many experiments have been made here in America with reference to this dried milk, particularly in New York City, under the leadership of Magill. It is, therefore, of interest to note that Hussy has made a series of investigations with reference to the use of this dried milk in infant feedings in the series of well and sick children in his polyclinic. Various forms of digestive disturbances were treated in this way. While his report does not lend itself to abstract in all its details, his conclusions are of a certain interest. He finds that dried milk is not a perfect substitute for fresh cow's milk in the case of infants who have passed through a disturbance of the gastro-intestinal tract, but that a considerable proportion of such cases seem to have done very well on the food. It appears to the author that in some cases there were bad

results, possibly to be attributed to the fact that the dried milk used was too rich in fats. He is unwilling to say that this food may be safely substituted for cow's milk in all cases during the summer months. Nevertheless, he believes that where milk of good quality cannot be obtained, this dried milk may be a valuable surrogate. He believes that the dried milk may be of a special value for short periods of time, and that it may be used to advantage as a temporary food when infants are traveling. He also believes that if this dried milk could be prepared with less fat, better results might be obtained.

Measles Superimposed on Scarlet.—Eaton (*Arch. of Ped.*, May, 1907) reports a case of a child of 5 years, who developed a typical scarlatinal rash. Three days later this rash was fading distinctly, yet the temperature ranged between 103 and 104 degrees, and a rather harsh cough was beginning, though there was no especial coryza. On the evening of this day, a typical measles rash was very pronounced over the entire body, while the throat showed simply a diffuse redness. Two days later, the rash of the scarlet fever was much faded, and the measles rash much more evident by contrast. In two days more, the measles rash began to fade also. There was an evening rise of temperature for 4 days longer. A double desquamation occurred, that of the measles occurring first, while the characteristic peeling of scarlet occurred about ten days later. There were no complications. It is noteworthy that there were no preliminary exanthemata, Koplik's spots being carefully looked for, but not found. In the discussion which followed the reading of this report, three other men reported cases of measles, superimposed on scarlet fever, one man being able to report several cases. The possibility of this double infection is therefore to be borne in mind.

NEUROLOGY.

IN CHARGE OF

Sidney I. Schwab, M. D.

Archives of Neurology. The Pathological Laboratory London Asylums, Claybury, Essex. Vol. III, Edited By F. W. Mott.—Volume three of this notable publication contains papers of the very greatest and widest interest. It might be well in this department to take note from time to time of the work that appears under the authority of this publication and to indicate by brief abstracts the character of the work which is being done in the laboratories of the London County Asylums. A large part of the work is done by the editor himself, F. W. Mott, and the unusual interest that attaches to his work is due to the fact that not only is he the pathologist in charge of the laboratories but he is likewise neurologist to the in and out patient department of the Charing Cross Hospital. He represents in an unusual degree the clinico-pathologist whose interest in nervous and mental disease is based upon

this double view point. His deductions are always supported both from the clinical point of view as well as from the post mortem studies. Certain papers are selected for abstract rather with an idea of giving some hint of the work done than with any desire to offer a complete resume of the volume under consideration.

Diphtheroid Organisms in the Throats of the Insane.—Eyre-Flashman (*Ibid*).—This is an investigation planned to determine the correctness of the theory advanced by Ford Robertson. The theory assumes that dementia paralytica is caused by the action of a specific organism, a member of the Klebs-Loeffler group, which is present in the tissues of the subject of this disease. Its specific power arises from the fact that owing to some antecedent disease the resisting power of the organism as a whole is overthrown, thus causing an invasion of the body tissues and producing the pathological changes and clinical symptoms which we recognize as dementia paralytica. Some of the causes which lead to the lack of resistance are alchohol excesses, syphilis, etc. Robertson as may be remembered gave to this specific organism the name bacillus paralyticans.. The investigation concerns itself with the attempt to find out if the organisms of the diptheroid group were any more frequent in the throats of dementia paralytics than with other persons. They combined with this the attempt to determine the frequency of the real diphtheria bacillus in the throats of the dementia paralytics in comparison with other individuals. The following conclusions are noted: That the percentage incidence of all diphtheroid organisms in the throats of the insane 17.3 is not in excess of that noted in the sane population outside the walls of an asylum. That the percentage of incidence of genuine diphtheriae in the throats of the insane is smaller still and compares well with that of the healthy sane. There is no evidence to show that the bacillus of this disease is more common in the throats of dementia paralytics than in the throats of other forms of mental disease. As a result the authors are unable to trace any connection of a causal nature between bacillus diphtheriae and general paralysis of the insane.

Alcohol and Insanity. The Effects of Alcohol on the Body and Mind as Shown by Asylum and Hospital Experience in the Wards and Post-Mortem Room.—F. W. Mott (*Ibid*).—This paper treats of this subject in a sane and objective way and aims to get at the root of the matter without any previous bias. This of itself gives the paper an almost unique interest. Mott seeks to avoid the dogmatism of the temperance advocate and at the same time avoids the carelessness of the therapeutic enthusiast in the food value of alcohol. The ward material of the Charing Cross Hospital rich in alcoholic subjects as well as the asylum material are fully utilized. The results of the post-mortem examinations in both institutions are used to correct the clinical conclusions. The material is large enough to enable the author to draw some general deductions which are of some interest and importance. Some of these conclusions may be stated as follows: The article as a whole is too detailed to admit of abstracting. The conclusions or rather opinions

are scattered here and there throughout the body of the article. Some of them are worthy of quotation. He says that in fully one-fourth of the male cases and in a large proportion of the female cases alcohol is an important factor in the causation of disease. Many cases of psychosis accompanied by symptoms of polyneuritis are of undoubted alcoholic origin. Small quantities of alcohol are of especial importance in those subjects of an advanced age in whom exist already arteriosclerosis due to syphilis or to some other constitutional cause. The quantity of alcohol which is daily consumed by the pillars of society is quite sufficient to convert an epileptic or potentional lunatic or certain feeble minded individuals into criminals or certifiable lunatics. On the other hand it is not a fact that alcohol is the only cause of the increase in insanity or its present apparent widespread development. Some intemperate writers would have it that without alcohol there would be no insanity. The author is inclined to the opinion that even were the consumption of alcohol limited to the utmost degree there would be no parallel decrease in the number of cases of insanity. He says that if an island might be set apart for total abstainers a high percentage of insanity would still exist there. Alcohol plays the part more and more in an indirect fashion, for example when an individual who has been an alcoholic and acquires syphilis, the infection is much more intractable and seems to be more inclined to attack the nervous structures than in other cases. The author has been struck with the few cases of alcoholic liver which was met with in the post-mortem room of the insane asylum as compared with its frequency in the hospital. He concludes as a result of these observations that only people with an inherently stable nervous system could drink long enough to acquire an alcoholic liver, the other classes become victims of mental affections one way or another and are thus prevented from consuming the required amount of alcohol. There is included in this paper several investigations in respect to alcohol in the production of disease. Of special interest is one on the role of alcohol in the etiology of epilepsy—179 cases of epilepsy in the Ewell colony were carefully studied with this end in view. As a result it was found that the predominant role that alcohol plays is that it has tendency to vitiate the stock and thus make resistance to disease less certain. In an individual of absolutely good nervous organization overindulgence in alcohol would not produce epilepsy. Such a person, however, would transmit a nervous system so weakened by alcohol to his offspring that in them even a minor amount of alcohol would be perfectly capable of producing epilepsy. Whatever opinion may be held on the subject of temperence in regard to alcohol, for the epileptic there is no such question, he should throughout his life regard it as a poison, having the power, even in small quantities, either to increase the severity of his malady or to light it up afresh if it has abated.

Two Cases of Amaurotic Dementia.—F. W. Mott (*Ibid*).—An examination of two cases of amaurotic family idiocy confirm the clinical observations of previous observers and the microscopic results differ only in minor features from the published reports. The novel feature of

this study is that there is included a chemical examination of the brain substance. This is a part of the new work that is being carried on in the laboratory chiefly by Koch. As a result of the chemical study it was found that there was a decrease of nucleoproteid which may be associated with the disappearance of the Nissl substance in the neurons and likewise the increase of simple proteids which may be correlated with the increase of glia fibrils. The essential histological feature of this disease is a progressive loss of the Nissl substance of all the neurons of the body. The mode in which this substance disappears is progressively from the periphery of the neuron towards the nucleus in the center of the cell. It may therefore be assumed that the Nissl substance is the derivative of the nuclear biochemical interaction of the cell protoplasm and its lymph environment. The inference is that the profound affection in the physiological functions of the central nervous system which characterizes this disease may be especially associated with a biochemical change in the metabolism of the nucleus. The cause of this regressive metaboloic metamorphosis may be an inherent lack of specific energy, racial or familial, of the neurons and possibly some hitherto undiscovered biochemical alteration of the blood or lymph.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

ECLIPSE SCOTOMA.—Aubaret (*Arch. d'Ophtalm.*, February, 1907).—Although defects of sight from exposure to direct rays of the sun were known to the ancients, the first exhaustive investigation of the subject was made by Aubaret and Lescarret in 1901. In the present paper Aubaret adds to our knowledge from the clinical aspect, concluding with an interesting and ingenious suggestion as to its pathology.

Complaint of visual defect is made within a few hours after observation by the naked eye of a solar eclipse. The scotoma is positive, well defined, circular, and in ratio with the size of the retinal image of the sun's disk. At 20 metres it is sufficiently large to embrace the whole area of an individual's face; at the punctum proximum it is about 2 mm. in diameter; an irregular trembling of the scotoma is a constant phenomenon and is probably due to efforts to evade the defect in the field. Sometimes the scotoma is paracentral in which case it is always displaced slightly upwards and to the right of the fixation point; metamorphopsia is common; color vision and perimetric field are unaffected; occasionally an evanescent conjunctivitis is an associated symptom.

Aubaret thinks that ophthalmoscopic changes are generally conspicuous by their absence, or when present are of the slightest and due to edema. Slight cases rapidly get well. Even in severe cases improvement is common. The patients experience little permanent embarrassment, as usually only one eye is damaged. One patient seen twenty-eight years

after onset in the right eye was a good shot from the right shoulder; he made use of his scotoma to discharge his weapon when the "sights" and mark became invisible.

To protect the retina against injury by light the eye diminishes the palpebral fissure, contracts its pupil and throws a pigment curtain over the rods and cones by means of the amœboid processes of the hexagonal cells of the retina; each of these protective mechanisms Aubaret regards as a true reflex phenomenon, and in the case of the last named the renex arc is discussed. When the intensity of light passes the limit against which these reflexes can protect the retina, each cell of the retina has to take its own defensive measures, which consist, as in unicellular organisms, in a withdrawal of its processes; if the injurious stimulus is extreme, such retraction becomes permanent and the neurone chain is irremediably broken. Congestion or edema of the retina, when present, is regarded as a further reflex of vaso-motor character. Such an explanation Aubaret considers capable of application to all degrees of eclipse scotoma, and therefore the more worthy of acceptation; he believes also that it accords closely with cases of sudden deafness due to intensity of sound vibrations.

Cavernous Sinus Aneurism Cured by a New Method After Failure of the Usual Operation.—Burghard and Pritchard (*Ophthalm. Soc. United Kingdom, Oph. Review,* May, 1907).—In 1901 the patient had a fall, followed shortly by the signs of cavernous sinus aneurism. Ligature of the right common carotid was followed by recurrence of symptoms immediately on getting up. Four years later the right eye was proptosed 3 mm., the conjunctiva was injected and there was pulsation of the globe, though no resistance to backward pressure. The fundus was normal. A loud systolic murmur was heard over the right temporal and orbital regions and the vessels could be felt beating above the seat of ligature of the common carotid artery, and pressure in this region controlled the bruit. Muscular movements of the eye were good. The external and internal carotid arteries were tied with no permanent benefit, so that eventually the right angular vein was ligated. From this time onwards there was complete cessation of the symptoms with no recurrence, except a slight temporary one. It is pointed out that these cases are usually of the nature of an aneurismal varix and that the simpler operations, such as tying the angular vein, are more likely to effect a cure than any of the major operations; they often get well without any treatment whatever.

Corneal Changes in a Case of Myxoedema, Probably Due to a Deposit of Mucin in Fibrous Tissue.—E. T. Collins (*Ibid*).—A female, aged 58, suffered from pain and inflammation in the left eye. Her health had been bad for seven months, and "her limbs were swollen and body getting larger." The skin was waxy looking, the neck was flattened in the region of the thyroid gland and the speech was slow and labored. Urine was normal. R. V. 6-6 L. V. 6-36, not improved.

In the left eye there was a slight ocular conjunctivitis and in the cen-

tre of the cornea a greyish haze made up of several small, discrete, globular looking grey dots in the anterior layers of the cornea; there were some elevations of the surface over the region of the opacity. The periphery of the cornea was clear; tension was normal and in all other respects the eye was healthy.

The globular appearance of the dots suggested that they might be drops of mucin deposited in the fibrous tissue of the cornea, as mucin is deposited in the skin and other structures in myxedema.

The Treatment of Keratitis and Lagophthalmus.—Francis (*Am. Med.*, April, 1907).—Francis describes an ingenious method of approximating the lids without the necessity for actual suture. "A piece of gauze is folded upon itself and a truncated triangular section is cut out, the folded side representing the truncated portion." This is done for both lids. One flap of each piece is cemented to its respective eyelid with flexible collodion; a silk thread with the free ends towards the outer canthus is placed in the creases and the free flaps are turned over and cemented to the fixed flaps, care being taken not to put collodion in the loops or on the thread. To allow room for traction on the lids the gauze is kept back a few millimetres from the ciliary margin. By tying the free ends of the threads the lids are held in position, but can be separated by untying the bow knot.

LARYNGOLOGY AND OTOLOGY.

IN CHARGE OF

W. E. Sauer, M. D.

The Treatment of Hypertrophic and Intumescent Rhinitis With the Galvanocautery.—Ingals and Friedberg (*Presented before the Section on Laryngology and Otology of the Amer. Med. Assn.*, Atlantic City, June 4-7, 1907).—The author's technique in the use of the galvanocautery, is as follows: The part is first anesthetized with a 4 per cent solution of cocaine guarded by small quantities of atropine, strophanthin, oleum caryophili and carbolic acid, which aid in the anesthesia and prevent constitutional effects of the cocaine. For the inferior turbinated bodies, a long, narrow cauterization is made, extending from the anterior to the posterior end, just deep enough to touch the bone along the junction of the middle third, either with the inferior or upper third, and the electrode being moved slightly backward and forward with a saw-like motion as the instrument is gradually drawn forward. The line of cauterization is swabbed over with a strong compound tincture of benzoin; then both nares are sprayed with an oil of cloves solution, and the side operated on is closed with cotton for four days; the cotton to be changed as often as is necessary. The patient is given an astringent powder and an oil spray to use at home. Occasionally, similar but much shorter cauterizations are applied to the middle turbinates, adopting the

submucous cauterization by means of a narrow electrode being run in at different points, and carried upward and backward 8 to 12 mm. under the mucous membrane. For the swelling at upper part of septum, oblique linear cauterizations are made down to the bone, about 5 mm. apart and 15 mm. long. Cauterization is not repeated until about 14 days, when the other naris is cauterized.

The authors conclude as follows: 1. That the galvanocautery properly applied is the treatment par excellence in hypertrophic and intumescent rhinitis, and that cures can be effected in more than 95 per cent of cases.

2. In cases complicated with deviations or exostoses of a slight or moderate degree the cauterizations of the turbinal bodies will be sufficient to bring about complete relief without the necessity of performing operations on the septum. The advantages to the patient in the avoidance of expensive, prolonged and tedious operations, pain, and subsequent discomfort, can readily be seen.

3. The dangers of middle ear infection have been greatly exaggerated, only one case among several thousand cauterizations, and that not in the list of those published, having come under our observation.

4. The liability to adhesion formation is not great, provided sufficient care is taken not to injure the opposite septal mucous membrane and provided that when the subsequent swelling is marked a probe be passed between the opposing surfaces the fourth or fifth day.

5. A 4 per cent solution of cocaine, according to the formula published, is sufficient in the vast majority of cases to induce a complete local anesthesia; three to six applications on a cotton-wound flat applicator being sufficient for this purpose. As a result of experience, especially where there is marked intumescence, we believe that a spray of adrenalin chlorid or suprarenalin, grain .1 to the ounce, materially assists in producing anesthesia.

6. The objection that the galvanocautery destroys too much mucous membrane is not valid if the cauterization is linear and is done properly; indeed, we believe that the full area of healthy mucous membrane is left by this method.

7. Scab and crust formation does not occur any oftener following cauterization than after other nasal operations; in fact, it was noted in but very few instances and in some of these a change in the spray solution caused a cessation of this trouble.

8. No packing is needed to prevent hemorrhage.

9. There is very little, if any, pain after galvanocauterizations of the turbinated bodies.

The Relation Between Diseases of the Tonsils and Enlargement of the Cervical Glands.—Campbell (*N. Y. Med. Jour.*, May, 1907).—The author states that the tonsils and glands of the neck are closely related through the lymphatic vessels and that in diseases of the tonsils the infection is carried to the cervical glands, which serve as barriers against general systemic poisoning. This relation has been demonstrated by both normal and pathological physiology.

Lymphatic glands are probably enlarged in all infectious diseases, and

they enlarge some days before the onset of active symptoms; this is a reliable indication that an acute infectious disease is incubating. Isolation at this time would probably prevent the spread of the suspected disease. In measles, the glands are enlarged some days before the Koplik's spots appear. In scarlet fever, when a mixed infection through the tonsils is frequently found, suppuration of the cervical glands is not uncommon.

In these infections, when a child is exposed to and contracts the disease, the bacteria or their toxins are carried at once through the tonsils into the lymphatic system, and in three or four days the glands begin to enlarge. Experimental inoculation demonstrates that tuberculosis of the glands of the neck is of bovine origin, the result of absorption through the tonsils.

The author concludes by saying, that diseased tonsils are in themselves not only perilous to the individual, but a great menace to the cervical glands and contiguous parts, and that if tonsils and adenoids were more often removed, infectious diseases, including tuberculosis would be more infrequent.

MEDICAL LAW AND MEDICAL JURISPRUDENCE.

IN CHARGE OF

IRVIN V. BARTH, LL. B.

LIABILITY OF FATHER FOR SERVICES RENDERED SON: MEASURE OF VALUE OF SERVICES.—Morrell vs. Lawrence (*Supreme Court of Mo.*, 1907), 101 S. W. 571.

Plaintiff sued on an alleged implied contract of defendant to pay him the reasonable value of his services as a physician rendered to defendant's adult son at defendant's request. The defendant, Doctor Lawrence, and his son, Frank, had been for some time residents of the City of St. Louis, and during that time plaintiff had been called upon to render professional services to Frank, who had always paid the bills on account of such services. Father and son later moved to New York City, where the plaintiff had been called upon to continue his services to the son. There had been some dispute in reference to the payment of the services rendered the son on one occasion in New York City, Doctor Lawrence having repudiated the contract, and the son having paid an amount less than the aggregate of the bill rendered. On May 31st, 1902, while the father and son were living in New York City, plaintiff received a telegram from defendant in the following words:

"Frank is quite sick. We would like to have you come and treat him. Leave on noon train Sunday, via Big Four. Answer at once."

Plaintiff answered June 1st:

"Will leave on Big Four at noon to-day."

At the New York station plaintiff was met by a messenger of Doctor Lawrence, was conducted to the Lawrence home and attended Frank constantly until Frank's death, on July 9th. Testimony as to the value of the services rendered varied from $300.00 to $1,000.00 a day. The amount of the bill sued for was $16,000—$400 a day for forty days. Verdict for plaintiff for $12,666. Defendant's motion for a new trial on the ground of error in instructions and excessive verdict was sustained. Plaintiff appealed. The court held in substance the following points:

First, there was ample evidence to take the case to the jury to determine the implied contract that Doctor Lawrence intended plaintiff to understand, and that plaintiff did understand that he would pay for the services, which the telegram called the plaintiff to render; secondly, the fact that the defendant in the case was a man of means and wealth, was not an element in determining the value of the services, and, hence, the amount to be awarded, and thirdly, in such a suit for the value of services, evidence of the plaintiff's good reputation in the community as a physician is inadmissible to show the value of the service rendered. The order granting a new trial was affirmed.

NOTE:—In the issue of this Journal of October, 1906, Vol. 13, No. 10, at pp. 841 to 843, there was discussed in connection with the case of *Hays vs. Wabash R. R. Co.*, (1906), 95 S. W. 299, the law as to the liability for services rendered to another, as developed in the State of Missouri. It was there noted that under the ruling in the case of *Meisenbach vs. the Southern Cooperage Co.*, (1891), 45 Mo. App. 232, the defendant was not liable to the plaintiff physician, who attended an injured employee of the company, although the Superintendent of the defendant sent a messenger to the plaintiff requesting his services. Likewise was it there noted under the decision of the court in *Rankin vs. Beale*, (1897) 68 Mo. Ap. 325, that there was no liability resting upon the father to pay for the services rendered his son of full age, although the father sent for the physician to attend his son; the court saying:

> "It has been repeatedly held that a mere request from a father to a physician to attend a child of full age, and though sick at the father's house, raises no implied promise upon his part to pay for such medical services."

But it will be further noted in the article referred to, in commenting upon those cases, that the following observation was made:

> "The application of the rule in any particular case is limited to the reason for its existence. Whenever it may be fairly inferred that the person requesting medical aid intended to pay therefor, and the physician so understood it, a liability will attach to such person when the services so requested may have been rendered."

The principal case illustrates most aptly the modification suggested in the above to the rule of law applied by the courts in the *Meisenbach vs.*

Southern Cooperage Co. and the *Rankin vs. Beale* cases. It was held that the evidence was sufficient to justify the jury in finding an implied contract on the part of the defendant, Doctor Lawrence, to pay for the service rendered his son. The court said:

"We think the evidence for the plaintiff in this case tends to prove a condition of affairs from which the triers of the fact, if they should see fit to draw the inference, might, with reason, do so, that Doctor Lawrence intended the plaintiff to understand, and the plaintiff did understand, that he would pay for the services which the telegram called the plaintiff to render. This was not a call on the plaintiff for services in the field of his daily work. It called him away from his established field of action. It called him, in effect, to resign his practice, to dedicate himself for the time being solely to the service of the defendant's son, whatever the consequence might be to his general practice. This is altogether outside of the category of the cases above referred to. The patient was not one of 20 or more for whom the physician might prescribe in a day. He was one for whom the physician must give up all other patients. The call was a very unusual one, and it involved unusual financial consequences. * * *

"The telegram is to be interpreted in the light of the relations of the parties, and of their past transactions with each other. Whether in that light, the defendant had reason to believe that the plaintiff would understand the telegram to imply an agreement to pay, and plaintiff did so understand, were questions for the jury under proper instructions, and if the jury should so find, the verdict should be for the plaintiff."

The following doctrine from Wood on "Master and Servant," was relied upon by the defendant's counsel:

"The rule is that, in order to render one liable for services rendered at his request, they must be rendered for his benefit, or under such circumstances that the person requested to render them was justified in understanding that they were for his benefit or upon his credit. But if the person performing the services knows they are not for the benefit of the person making the request, and that he is under no legal obligation to pay therefor, he cannot predicate a claim against him, unless he expressly promised to pay for them before the services were rendered."

In answer to this, the court said:

"That is a correct statement of the general rule of law on that subject, but it is not of invariable application. We see no objection to applying it to the case of one calling a physician to a suffering stranger, when there is nothing in the situation to suggest to the physician that the man calling him has any deeper interest in the case than the prompting of common humanity; and we see no objection to applying the rule to the case of a father calling a physician to wait on his son, if

the son is of age and living to himself, and if there is nothing in the conditions to indicate that the father is taking upon himself anything more than the office of messenger for his son. But there is something more than the dictates of common humanity between father and son, and the fact of that relationship is to be considered in connection with other circumstances, if there are circumstances, indicating to the physician that the father called him on his own account to serve his son."

As to the second point decided, the court held that the plaintiff could not show to the jury the defendant's wealth as an element "to be taken into the account in the measurement of the value of the services, unless it is in rebuttal of evidence from the other side attempting to show the custom of a lower standard."

"If the defendant should introduce evidence to show that the plaintiff for similar services was accustomed to charge smaller fees than those sued for, the plaintiff would have a right to show, if such was the fact, that the smaller fees were charged to poor men because of their poverty, but that the defendant's financial condition justified a charge for fair and reasonable compensation. In the case at bar, there was no effort on the part of defendant to prove that the plaintiff or other physicians were in the habit of charging smaller fees for like services. Hence, there was no occasion for rebuttal evidence to show that smaller fees were charged out of consideration for the poverty of the patients, and that defendant's financial condition did not entitle him to that indulgence. Instruction No. 3 did not cure the error in this respect of instruction 2. It justified the jury in believing that there was a difference between the reasonable value of services rendered a rich man and those of the same kind rendered a poor man. There is no such difference."

Finally, with reference to the third proposition, wherein it was attempted to show the plaintiff's good reputation in the community as an element affecting the value of services rendered, the court said:

"The plaintiff's general professional reputation was not drawn in question, and the jury had no right to consider it in estimating the value of the services. The plaintiff's professional reputation in the community would doubtless have some influence on the amount of income derived from his practice, and if that was in dispute, and if he was suing for loss of income caused by absence from home in the service of defendant, evidence of that reputation would be admissible. But there was no question of that kind in the case. The plaintiff testified that his income was $6,000 to $10,000 a year, and there was no dispute of that. * * * *

"It was competent for the plaintiff to show that he was a physician of learning and skill, and that fact should be taken as an element in estimating the value of the services rendered; but the plaintiff's general reputation as a physician had no more to do with the case than his general reputation as a man."

CORRESPONDENCE.

PHILIPPINE LETTER.

[FROM OUR OWN CORRESPONDENT.]

Conditions here in the islands vary largely with the locality, hence one never finds universal prosperity or adversity. In a general way the lot of the average native is probably as good as it was under Spanish rule, but no better. In some parts of the islands the people have a hard task to keep body and soul together, while in others, especially in the hemp producing localities, a living is easily made. Stripping hemp ordinarily yields a man from 25 to 40 cents a day. If the people marketed their own hemp there would be a much larger profit, but since the average *tao* lives from hand to mouth and must have his money on the spot for immediate needs, whenever he has accumulated a hundred pounds or so of hemp, it goes into the hands of the nearest chino, who keeps it in storage and finally markets it at a good profit. Each little village or barrio, no matter how small, has one or more Chinese who are always ready for a bargain and who have invariably the business capacity to see one. The Chinese have been in the islands for hundreds of years, no one really knows how long, and they are the real business people of the Philippines. Intermarriage with the natives is naturally common, indeed a large proportion of the natives in some parts of the archipelago show the Mongolian strain. The Chinese *mestisos* or half breeds seem to combine whatever virtues the Filipino may have with the shrewdness and sharpness of the Chinaman, and although as a rule hated by the Filipino, they always show the capacity to succeed. The Japanese, on the contrary, never seem to have made much headway and are not very prominent in the business of the islands.

At the time of writing, the islands are at peace and in those having a Christian (so-called) population, civil government reigns or is supposed to reign. In two of the islands of the Visayan group, however (Samar and Leyte), a state of general disturbance has prevailed for more than a year, due to what is known as "Pulajaneism." The natural habitat of the Visayan is on or near the coast and to a greater or less extent he is a seafaring person. Certain of the people have, however, elected to live in the mountains, sometimes because they are "wanted" for misdemeanors or crimes, sometimes because of feuds, but probably most often because they wish to avoid taxation with its annoyances and petty graft. Your ignorant citizen *tao* goes our Revolutionary hero one better and instead of "No taxation without representation," with him it is "No taxation at all." I think he cares little about representation; what he really likes is to be looked after, and a wise if even a severe paternalism, albeit

not savoring of our cherished belief in democracy, is, I believe, far more to his liking than representation which does not represent. I recently asked an intelligent native if he thought the state of unrest in Leyte and Samar was at all due to political reasons and if the forthcoming Philippine Assembly would cause it to cease; his reply was: "What do these people know or care about the Assembly?" I am speaking of present and average conditions now and of what I believe would be a more successful way of administering the affairs of the islands with justice; no one can tell, naturally, what course the future may show to be advisable.

The Pulajanes live far back in the most inaccessible parts of the mountains and our army, on account of the difficulty of following them, has had much trouble in stamping out this lawless organization; for an organization it undoubtedly is, a loose one perhaps, but having its generals, colonels, captains and lieutenants, and issuing various and complicated orders to its followers. The Pulajanes have a uniform of blue with a red facing and in one of their captured strongholds I once saw an American sewing machine upon which a few hours before uniforms were being manufactured. The trouble in the past has been that these people not being able to live upon what they could raise in their camote patches, were forced to get food from the coast towns, and believing that might made right, at intervals they swooped down and raided the different *barrios*. As a rule they killed few if unopposed, but contented themselves with carrying off the edibles in town and often a few temporarily made slaves for pack animals.

General Wood has threatened, it has just been reported, that unless the Army is given full swing, he will withdraw the troops from the field and let the civil authorities work out their own salvation. The trouble seems to have been that the civil authorities have opposed giving the Army full power to act in suppressing the outlaws and have wanted it to be a sort of additional police force. Most officers contend that until the seat of disturbance is put under military control the situation will continue, since military authority cannot be maintained while hampered by superseding and often meddlesome civil authority, especially as the latter is quite unable to cope with the situation.

While I was in Manila last January, through the kindness of Dr. Shattuck, the prison physician, I was afforded the opportunity of inspecting Bilibid Prison. This is a large general prison for the whole archipelago, not being used however for military prisoners. Some days previous to my visit Dr. Strong, of Manila, had injected anti-cholera vaccine into a number of prisoners. Unfortunately the tubes had become contaminated with the organisms of bubonic plague so that typical plague was produced. These cases were all, I believe, injected in the arm, but the buboes first appeared in the inguinal lymphatic glands, as is the case with ordinary epidemic plague. As everyone knows, a number of these

cases died and the unfortunate affair has since been widely heralded. I saw a number who recovered. Most of these had large sloughs at the site of inoculation. It was indeed a sad blow to experimental medicine, but it has since turned out that no human agency could have foreseen what might happen. At one time there seemed to be an effort, more or less determined, to have Dr. Strong removed from his position with the municipal government, and there are doubtless many Filipinos who would gladly see all Americans removed from the Board of Health as well, but Dr. Strong has been and should be retained in the service of the government. The hospital in Bilibid has a good service with adequate operative facilities and there is abundant opportunity for pathological work.

The Municipal Laboratory of Manila is a splendid institution and is doing fine work with such men there as Drs. Strong, Musgrave and Marshall. The building is well appointed and is equipped with everything necessary for pathological and bacteriological work. There is a splendid collection of photographs there, covering almost everything of interest in the islands in anthropology, botany and zoology, as well as a great number of photographs of pathological specimens, types of disease, microphotographs of bacteria, etc., and best of all one may look through these volumes, take down the number of the photographs he wishes and supply himself forthwith, by simply leaving an order at the office.

During the past few months the segregation of the lepers has occupied the minds of the authorities. All persons supposed to have leprosy, or in whom there was any suspicion of the disease, were examined in the *barrios* and *pueblos*. The local *presidente* as a rule gathered the sick ones together and upon the arrival of the health officer they were examined. A boat known as the "leper boat" went along stopping at the various ports. Those suspected of having leprosy were taken aboard and not allowed to go beyond a certain point; there they were examined, and some material, usually scrapings from the nose, was examined, several times if necessary, for the bacillus lepræ. If the finding was positive the sufferer was sent above and kept under guard; if negative he was allowed to go. Each night the vessel was carefully swabbed down with an antiseptic. A great number of lepers have been gathered in this way but a great many more have probably eluded the health officials. The law spares neither position nor wealth, and one of the rich men of the islands, a victim of the disease, has been condemned to exile. He is now under a heavy bond to go to Culion whenever he is called upon to do so, and is at present winding up his business affairs. The leper colony is situated upon Culion Island, one of the most isolated of the group and just north of Palawan. Upon it all the lepers must live, they being provided, however, with subsistance by the Philippine Government, so that no hardship, beyond the isolation, is entailed. Upon a neighboring island their families may live, so that a little ray of sunshine falls even upon the leper here.

The natives are for the most part very ignorant of what may be done

for them in a medical or surgical way. If they come to the doctor at all, it is always in a very late stage, and the doctor is expected to do whatever is to be done at the first sitting. A small boy was brought to me not long ago with a bolo wound extending completely through the foot. On account of the infection, I gave him an anæsthetic and put a rubber drainage tube through the foot, expecting to irrigate through this daily. After a week had passed without seeing the patient again, although I had explained to his mother in three languages the dire results of neglecting to come *"manana,"* I sent emissaries out and succeeded in finding him and removing the tube. In time I have no doubt he would have regarded that tube as a part of his anatomy. All of us have had our trials in not having patients (especially interesting ones) come back to our clinics, but over here one must learn not to be disappointed if he never sees his patient a second time. A common practice among the natives is to wear a cord about an aching member. If a man has a pain in his shoulder, he wears a cord about his arm; if the pain be in his great toe, he winds a string around it. At first I thought that possibly Bier's congestive treatment for inflammation was in vogue here but on investigation it proved to be superstition, not science.

Infant mortality is everywhere very high, how high at present we do not know, since the death of a young infant seems to make but little impression upon the parents and it is rare for them to call a physician even if one can be had; and away from the larger towns there is no record of death or interment. Although childlike and excitable, the people bear pain, sickness and death with remarkable stoicism, perhaps because they regard these as a part of their heritage; the women especially seem to be able to endure the severest suffering without a groan. With the better educated class gratitude is often found and often expressed; with the more ignorant it seems to be never expressed, although it may be felt. One comes to feel in time, however, that he must not feel aggrieved if his services seem to be unappreciated, for surely must we not extend Tolerance to Ignorance?

Manila, June 10, 1907.

PARIS LETTER.

[FROM OUR OWN CORRESPONDENT.]

TREATMENT OF LESIONS OF THE LUNGS.

At a recent meeting of the Academy of Medicine, M. Delorme presented an important communication on the necessity of operative procedures in penetrating wounds of the thorax accompanied by lesions of the lungs. A most interesting discussion followed the reading of the paper. M. Delorme insisted on the necessity of recognizing the grave indications in these cases such as pulmonary hemorrhage, syncope, the

thread-like pulse, superficial respiration, dyspnoea, attacks of suffocation, delirium, temperature, location of external wound, hemoptysis, external hemorrhage and hemothorax. He also thought that too much hesitation was practiced before entering the lung and that a hemothorax demanded immediate intervention.

In the course of the discussion it was shown that the partisans for abstaining from interference were in the majority, and that immobilization with occlusion of the wound ought to be the rule. Without doubt there may be exceptional cases where immediate intervention is indicated, but in the majority of cases lesions of the lungs get well when let alone. Moreover the danger of an empyema should not be overlooked. As to what constitute the indications for an immediate operation, it is most difficult to determine.

CHOLECYSTITIS WITH GALL STONES.

At the Academy of Medicine, July 3rd, M. Terrier reported five cases of cholecystitis with gall stones which had been successfully treated by the Kehr operation. This operation so satisfactory in these cases is less so and can be a source of danger in angiocholitis or in cholecystitis without gall stones.

TRAUMATISM AND APPENDICITIS.

In the course of a discussion which took place at the Societe de Chirurgie, M. Guinard reported four cases from which he concluded that there are only two ways in which traumatism can produce appendicitis: its action may be direct or be the cause of a periappendicular peritonitis. This opinion was not that of the majority of speakers who took part in the discussion. Most of them thought that traumatism does not bring on appendicitis, but that it merely reawakens a latent form of the disease.

INTESTINAL INTUSSUSCEPTION IN INFANTS

In an address, delivered at the Academy of Medicine, June 25th, M. Kirmisson said that the deplorable results from a surgical intervention in intestinal intussusception in infants proves that the diagnosis of this affection is generally made too late. In three cases recently attended by him, the operation was performed 48, 51 and 66 hours after the first appearance of the symptoms. In these three cases death supervened some hours after the operation. M. Lyot, on the other hand, operates six hours after the disease sets in.

M. Kirmisson asserts that the diagnosis is not difficult. Generally, nursing children suddenly present symptoms of intestinal obstruction with colic, spasms, sometimes convulsions; to be followed almost at once by a bloody discharge from the anus. This, according to Cruveilhier, is an almost constant sign. It is necessary to interfere at once and not delay until graver symptoms occur, for a spontaneous cure cannot possibly take place.

Generally the intussusception progresses from above downward. Without recourse to anesthesia, a large rectal injection should be made, the subject having first been placed in an inverted position Should this fail of good results, a laparotomy should be performed at once, the surgeon not quitting the patient until the obstacle is removed.

ASEPTIC PURULENT PLEURISY.

MM. Widal and Gourgerot, in a very important communication, assert that the cephalo-rachidian fluid, whilst remaining aseptic, can assume a purulent appearance from the accumulation of normal polynuclear cells, just as in the pleura certain aseptic purulent effusions, with intact polynuclear cells, follow a severe pulmonary congestion. These aseptic purulent pleurisies, though rarer than the effusions of a bacterial origin, should be better known. They develop in the neighborhood of a pneumonic deposit and are merely concomitants of a congestion. They are not specific. Moreover the integrity of the polynuclear cells is soon broken up under the microscope.

OBITER DICTA FROM FOREIGN JOURNALS.

THE REGICIDES.

The morbid psychology of the regicide is summed up as follows, by Regis in *La Revue Medico-Sociale*:

The regicides are degenerates in whom the mental incoordination is shown in a characteristic exaltation. This exaltation consists of a sort of innate mysticism, often hereditary, which lashes the possessor instinctively into political and religious excesses. In case the tendency is not ruffled by circumstances that might bring on an exacerbation, it remains latent and inoffensive; but should it be fed by revolutions, political discussions, outre social theories, inflammable books and journals,—in a word, by an atmosphere surcharged with the dangerous element of excitement plus culture, it will almost immediately take on the hue of a most dangerous fanaticism.

An idea, good or bad, falls somewhere on the earth; it grows rapidly like any other weed, choking by its very poison any remnant of sanity in its way. Ere long the time arrives when it dominates the mentality of one or another exalted degenerate, and the message he reads is that he, of all men, is called upon to strike a blow, to sacrifice his days for a just cause, to kill a king or a powerful personage,—in the name of God, country, liberty, anarchy, or for analogous reasons.

The regicide, due to an exaggerated pride or a foolish altruism, is firm in the belief that he is the avenger and the martyr. This is a thought that has recurred with every one of the ilk; whether it was the ancient regicide, who immolated his royal father for the good of the Church, despite the tortures he knew would be visited upon him, but who did the deed joyfully buoyed up as he always was by the belief of gaining a secure place in heaven; or the anarchist of to-day, the assassin of a chief of state, a queen, a statesman, a representative in authority, who calmly undertakes the job at the price of his own life in the hope that ultimately anarchy will be triumphant. This idea with this class of degenerates soon becomes an obsession, despite the opposition which occasionally is brought to bear against it. In fact, the greater the opposition, the greater the obsession, fed and reinforced, as it usually is by the individual's hallucinations.

These hallucinations are in every respect similar to those of the mystics. They consist of apparitions, which visit the regicides at night during sleep, or in the day-time when they are in a meditative or ecstatic mood. The apparitions take the form of supernatural objects or lumin-

ous beings, that dictate the orders and reveal the glorious mission to be accomplished. Strengthened more or less by these hallucinations, the conviction is such that in executing their act, the regicides feel that in following the mission they are obeying a superior force, just as the mystics invoked the approbation of the Almighty before they struck a blow.

Remembering the regicides' mentality, their characteristics to meditate, to plot and to achieve alone, it can readily be understood that they do not wish to divide honors when committing a crime. Whether we consider the regicides of to-day such Caserio, Lucheni, Bresci or Salsou, or those of centuries ago such as Jacques Clement, Jean Chatel, Ravaillac and Damiens, one thing stands out prominent,—namely, that invariably the regicide acted alone, and though strenuous endeavors were made to find an accomplice or a confidant, all efforts proved fruitless.

MEDICINE AMONG THE ANCIENT GREEKS.—THE ORACLE OF EPIDAURUS.

Dr. Raymond Neveu has recently written a book of great interest on the subject of medicine among the ancient Greeks. He unfolds a clear and concise picture of medicine from the most remote times to the founding of the Alexandrian School. In one of the chapters the author recounts a trip he made to Epidaurus, the fatherland of Esculapius, where among the ruins are still to be seen vestiges of the Temple in which the sick sought responses and the recovery of their health by sleeping there. A number of illustrations are corroborative of the description. In what way was Esculapius consulted? Dr. Neveu enlightens us on this score as follows:

"First it was necessary to purify the body by plunging into the pool inside the Temple; then a sacrifice of cakes or a ram (according to one's fortune) was offered. With the approach of evening, after having attended to the lighting of the sacred lamps, the sick retired to a dormitory for the night. It was during these beautiful starry nights, when the sick were deep in dreams, that Esculapius appeared and made known to each the course of treatment to be pursued. For some he prescribed lime-water and the juice of water-hemlock, for others gymnastics and cold lotions."

M. Diehl's highly interesting and documentary book, according to *Journal de Medicine et de Chirurgie*, is filled with Esculapian prescriptions. One of them consists of a partridge steeped in incense; another, a sovereign remedy for pleurisy, is a cataplasm of ashes moistened with wine and applied to the patient's chest. Against the spittting of blood, the infallible remedy was to eat, for three days, the kernels of fir-cones,

prepared in honey; to recover the sight, nothing was better than a certain collyrium made of the blood of a white cock; and finally water enjoyed a great popularity both for drinking and bathing purposes. But the most curious prescription is the one Esculapius gave to a poor dyspeptic who had supplicated the god for help:

"Never get angry. Limit yourself to a special diet composed of bread and cheese, parsley and lettuce, slices of lemon boiled in water, milk mixed with honey; then go to the gymnasium, balance yourself on the highest terraces of the sanctuary, rub your body thoroughly with dust, walk barefoot before bathing, take a hot bath into which has been poured wine, wash and rub well and for the trouble give a drachma to the bath-keeper. Afterwards rub with salt and mustard, gargle with cold water so as to cleanse the uvula and tonsils and finally, make a sacrifice to Esculapius, and do not forget on leaving to tip the attendants."

The next day at dawn, each invalid related to the priest the instructions of Esculapius. "Ancient sympathy," says M. Diehl, "was of a practical nature. The propitiatory offerings, destined to render the god kind and beneficent, were always insignificant and modest. It was only after a prayer had been granted that the debt to the god was liquidated. Then a veritable demonstration in his honor took place. If Esculapius remained deaf to the entreaties of his worshipper, he lost all right to the promised offering, but when things were satisfactory, the worshipper was most punctilious about paying, and since Esculapius was a man of his word, popular feeling made it possible that there was no stinting as regards gifts and offerings." In fact, the proceeding had all the modern features of a quick and grateful reciprocity!

Judging by all the prescriptions that Esculapius dictated to his devotees, one can conclude that he was a great hygienist, and with the exception of the charlatanism prevalent at the time, the great priests really made wonderful cures by applying the simple ideas of hygiene, ideas true of all times.

ALCOHOL AND THE INFANT.

M. Brunon, whose efforts against the spread of alcoholism in Normandy are well known to the public, has the following to say about the consumption of alcohol among infants in that part of France:

In Normandy it is not unusual to see women mix coffee and cognac in nursing bottles. These women are employed outside their homes; therefore, some means must be devised to keep their babes quiet in the cradles during their absence. Their ingenuity takes this form: A bottle containing the mixture is placed under the pillow to keep it warm, and attached thereto is a long rubber tube which the child, once the nipple is

placed between its lips, reluctantly gives up. Automatically it "gets drunk" and thanks to its heavy slumbers, the neighbors are not disturbed. The nursing bottle, minus the long tube, recommended both by the Prefect and the Medical Inspector, is decidedly *en evidence* on the table or mantelpiece in various homes, but its use is nil, for it requires to be held whilst nursing the babe. All this sounds like exaggeration, nevertheless in the district indicated it is a twice-told tale. Ask any physician, draw him out if possible, and you will soon hear a corroboration of the above startling facts.

According to M. Tourdot (*Journal de Medicine et de Chirurgie*), approximately one-half of the families of workmen at Rouen resort to the coffee and cognac "treatment" for babes, whose ages vary from six to eight months. One very honorable woman who was bringing up a number of babes with her own, was in the habit of administering a teaspoonful of cognac at night to induce sleep. After the occurrence of the third death in this interesting family, Tourdot discovered the true cause.

All that we could possibly say on the subject of the abuse of alcohol among infants would fall short of the truth. A workman's home that is sober is the exception.

BOOK REVIEWS.

THE TREATMENT OF DISEASE, A MANUEL OF PRACTICAL MEDICINE. Reynolds Webb Wilcox, M. A., M. D., LL. D., Professor of Medicine at the New York Post-Graduate School and Hospital, Consulting Physician to the Nassau Hospital, Visiting Physician to the St. Marks Hospital, Fellow of the American Academy of Medicine, etc., etc. Quarto Volume, 911 pages. P. Blakiston's Son & Company, Philadelphia. Price, $6.00.

This treatise upon practical medicine gives to the profession a concise modern conception of the late clinical data and therapy. The volume covers the entire field of medicine, giving enough space to the definition, etiology, pathology and symptomology of each individual disease to present them in their most advanced aspects. To this is added the treatment which is considered more completely and in detail. The completeness of the volume regarding all these demands make it especially valuable for medical men, even those interested in special fields, for it meets the requirements of both the general practitioner and the specialist.

PRINCIPLES IN THE PRACTICE OF MEDICINE. Arthur R. Edwards, A. M. M. D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Northwestern University Medical School, Chicago; Attending Physician to Mercy, Wesley Hospitals, Etc. Octavo Volume of 1528 pages, illustrated with 110 engravings and 19 plates. Lea Brothers & Company, Publishers, Philadelphia.

This new treatise, covering the entire range of modern practice, is much the most advanced general work extant at the present time. The most recent systematic classification of the diseases, the well-selected compilation of the latest scientific theories and principles, and the specific application of detailed therapy make this book a distinctive one on the principles and practice of medicine. The author has followed the same thorough system in dealing with every individual subject in this book. This makes it an easy matter to appreciate the importance of the separate divisions and at the same time greatly facilitates the process of reasoning and deduction which will necessarily promote more systematized thinking in clinical medicine. The intimate association of the clinical manifestations with pathological lesions, and not their separate consideration without this relationship impresses on the book the latest method of advancement and will be the means of producing a better general understanding of the direct cause for clinical findings. The large number of tables giving the differential diagnosis of similar diseases, the statistical frequency of each disease, the value of the cardinal symptoms given in the order of their importance, etc., make it without question the best reference for diagnosis obtainable in the English language. The detailed treatment, including, in many cases, the physiological action of drugs, the rationale of medical, dietetic and hygienic therapy, besides the introduction of the accepted surgical indications of to-day, places this treatise at the head of the texts on general medicine.

THE ESSENTIAL OF HISTOLOGY, DESCRIPTIVE AND PRACTICAL. For the use of students. By E. A. Schaefer. 7th Edition. Lea Brothers and Company, Philadelphia, 1907.

An old friend in a new cloth. It is a relief to turn over the pages of this book, admire again the concentrated and objective diction and to be elevated by the aspect of the beautiful illustrations. None of the so-called text books of histology, with which our book shelves are crowded, can compare with this volume, that, absolutely original, is impartial in dealing with the subject and abstains from theorizing and speculating on isolated data. For a student no more ideal guide can be imagined. It ought to replace the majority of books now in vogue.

A Review of the Opsonins and Bacterial Vaccines. By E. M. Houghton. Directions for the Determination of the Opsonic-Index of the Blood. E. C. L. Miller. *Therapeutic Gazette,* January 15, and March 15, 1907. Reprint.

This reprint can be recommended for use by workers that want to become familiar with the subject of opsonins and perhaps themselves try their hands on it. It gives all that is necessary and abstains from far reaching conclusions that, unfortunately, are so rampant, of late.

Woman. A Treatise on the Normal and Pathological Emotion of Feminine Love. By Bernard S. Talmey, M. D. Practitioner's Publishing Co., 62 West 126th Street, New York City.

The subject matter of this little volume of 228 pages is clearly stated in its title. There can be no doubt that the practicing physician is in need of reliable information on this subject, so that the reviewer can limit himself to the statement that the necessary information is given in this book in a most judicious and satisfactory form.

A System of Medicine by Many Writers. Edited by Thomas Clifford Allbutt, Regius Professor of Physic in the University of Cambridge, and Humphrey Davy Rolleston, Physician to St. George's Hospital and to the Victoria Hospital for Children, etc. London, McMillan & Co. Limited. 1907. Volume Two. Price: Cloth, $5.00 per volume.

The second volume of this famous system appears in two parts, each representing a book of more than a thousand pages. The first part contains the continuation of the Infections and Intoxications, together with an important article on the General Pathology of Infection, by James Ritchie. By grouping all the Tropical Diseases and Animal Parasites together in a second part of the second volume the editors have produced a complete work on Tropical Medicine.

The various articles contributed by authoritative writers represent the most up-to-date information available on the different subjects.

Practice of Gynecology. By W. Easterly Ashton, M. D. LL. D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Third Edition, thoroughly revised. Octavo of 1,096 pages, with 1,057 original line drawings. Philadelphia and London, W. B. Saunders Co. Cloth, $6.50 net.

A text-book which, within two years, calls for three editions, does not seem to need further praise. It certainly can be assumed that it presents the subject in a form most suitable to practitioner, teacher and student. The fact may be stated, however, that the changes noticeable bycomparing this new edition with the second, beyond doubt, justify both the author and the publishers to call it a "thoroughly revised third edition."

Catholic Churchmen in Science. Sketches of the Lives of Catholic Ecclesiastics who were among the Great Founders in Science. By James J. Walsh, M., D., Ph. D., LL. D., Professor of Medical History, Fordham University Medical School, New York City. American Ecclesiastical Review (Dolphin Press) 1906. Pp. x-221. Price $1.00 (plus 8 cents postage) net. Philadelphia.

This volume is of special interest to physicians, as it contains sketches of the lives of men who made great contributions to science, especially to the science of medicine. Copernicus, the greatest of modern astronomers, was a physician. Basil Valentine, the founder of pharmacological chemistry; Linacre, the founder

of the Royal College of Physicians, of London; the great anatomist and discoverer of the duct which bears his name, Steno or Stensen; Kircher, who first described the association of insects with the carrying of infectious disease; Abbe Hauy, the founder of crystalography; and Mendel, whose work on heredity in biology is the foundation of the science of heredity;—these are the men whose lives and characters are described. The book contains portraits of each, and supplies in compact form knowledge which otherwise could only be obtained by rather painstaking research in medical literature.

A Manual of Obstetrics. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women in the George Washington University, Washington, D. C. Tenth Edition, enlarged and thoroughly revised, with 30 Illustrations and 3 Colored Plates. Cloth, $2.75. Lea Brothers & Co., Philadelphia.

King's Manual is now beginning its second quarter-century with its tenth edition. No other obstetric book extant has such a record. In its present form it reflects the most up-to-date obstetric teaching in that clear and concise way which has gained for this little volume its well deserved popularity.

The Abdominal and Pelvic Brain. By Byron Robinson, M. D., Chicago, Publisher; Frank S. Betz, Hammond, Ind.

The volume embodies the author's views concerning the anatomy, physiology and pathology of the abdominal and pelvic brain. The former is the solar and epigastric plexus; the latter the group of cervico-uterine ganglia surrounding the uterus. The work, furthermore, contains chapters on gastro-duodenal dilatation, splanchnoptosis and many other subjects of interest and practical importance.

Most of Robinson's views are based upon personal original investigations. It is this fact which makes the volume interesting and instructive, although one can hardly agree with all the theories and ideas propounded by this prolific writer.

Essentials of Obstetrics. By Charles Jewett, M. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, Brooklyn, N. Y. With 80 engravings and 5 colored plates. Cloth, $2.25. Lea Brothers & Co., Philadelphia, 1907.

This well-known, compact volume of 413 pages, 12mo., is an introduction to the more elaborate treatises. It can, with good advantage, be used by the student as a guide in following the theoretical and practical teaching of college courses. The book has been thoroughly revised and to a large extent rewritten.

Paraffin in Surgery. By Wm. H. Luckett and Frank T. Horn, Mount Sinai Hospital Dispensary, New York. With 38 Illustrations. Published by Surgery Publishing Co., New York.

Quite a careful monograph on this subject, which will serve well as a guide for those intending to use paraffin. The history of its use, the pathology and chemistry are well covered, and the experience of the authors is given in case histories from their practice. A complete bibliography is given.

A Guide to Diseases of the Nose and Throat, and Their Treatment. By Chas. E. Parker, F. R. C. S., Edinborough. Surgeon to the Throat Hospital, Golden Square, W. With 255 illustrations. New York. Longmanns, Green & Co., 1906.

The volume of 624 pages, founded on the lectures given by ten authors, at the Throat Hospital at Edinborough, is intended as a guide to those attending those special lectures.

In the first chapter the author lays great stress on the methods of examination. The next chapter is devoted to the various methods of local treatment. In the succeeding chapter the various diseases are discussed.

The various subjects are treated in a very careful manner, and the only drawback to the work is that only two pages are devoted to anatomy, and the physiology is entirely neglected.

The work contains an appendix in which recent studies of Fibrinous Rhinitis and Nasal Diphtheria are discussed.

The book has a very good index.

A Text Book of the Practice of Medicine for Students and Practitioners. By Hobart Amory Hare. Second Edition, Revised and Enlarged. Lea Bros. & Co., Philadelphia and New York, 1907.

The author has endeavored to embody in this volume of some 1,200 pages, the experience of more than twenty-two years of active hospital and private practice. During this time he has been teaching the subjects of clinical medicine and therapeutics.

The volume is intended, therefore, as a practical guide and text-book for physicians and students. The work is well arranged, the first part being devoted to infectious diseases, the second to diseases of the respiratory system, diseases of the circulatory system, diseases of the digestive tract, peritoneum, of the liver, of the biliary tract, of the pancreas, of the kidneys, of the ductless glands, lymphatic system, of the blood, of nutrition, intoxications, diseases due to animal parasites and diseases of the nervous system.

The chapter on the nervous system is divided into those diseases in which the chief manifestations are in the brain and its membranes, those in which the chief manifestations are in the spinal cord or its membranes, those in which the chief manifestations are in the nerves, those in which the chief manifestations are in the muscles and functional nerve tissues and diseases of disputed pathology. This chapter is especially well arranged for the practitioner.

The chapter on tropical diseases, heretofore scarcely known by our practitioners, is especially full, and all of those diseases met with in our possessions and which are frequently transported to our shores are dealt with in detail.

Medical Diagnosis: A Manual of Clinical Methods for Practitioners and Students. Fifth Edition. By J. J. Graham Brown, M. D. and W. T. Ritchie, M. D. New York: Imperial Publishing Company, 1907.

The popularity of this book is attested by the fact that it has gone through four editions. It will be found a thoroughly practical summary of the methods in daily use both as regards physical examination and laboratory work. It is perhaps inevitable in a book of this character that the discussion of the finer diagnostic methods should be somewhat uneven. Thus no mention is made of the more recent methods of cardiac percussion nor of functional cardiac diagnosis. On the other hand the discussion of the Widal test is very complete, and more than four pages are devoted to the opsonic index.

The Common Bacterial Infections of the Digestive Tract and the Intoxications Arising From Them. By C. A. Herter, M. D. New York: The Macmillan Co., 1907.

While the intestinal diseases due to the bacilli of typhoid, dysentery and cholera, have been studied by a multitude of careful observers, there remains a large field of obscure bacterial infections of the alimentary tract that have hitherto been nearly completely neglected. Prof. Herter has for some time devoted himself to the study of the intestinal flora in various chronic pathologic conditions and his book embodies an account of his methods and a discussion of his results. While as yet these latter do not lead to any very definite and practical conclusions, his

book will be found a mine of stimulating and interesting information and should be in the hands of every physician interested in the study of digestive disorders.

ANLEITUNG ZUR DIAGNOSTIK DER MAGAN—DARM—UND KONSTITUTIONS-KRANKHEITEN. Von. Dr. Gaston Graul. Wuerzburg. A Stuber's Verlag (Curt Kabitzach), 1907.

The number of books on clinical diagnosis that are steadily being issued is apparently endless. Most of them are merely summaries of the methods in general use and had better remained unwritten. Occasionally, however, a volume appears that is not merely a compend, but embodies individual views, the result of an extensive personal experience. Such a one is the little book under discussion. The writer is a former assistant of von Noorden and is now at the head of a large institution of his own. The various methods of gastro-intestinal diagnosis are discussed and criticised from the point of view of his own personal experience and his conclusions are not always at one with the generally received views. The little book well deserves translation.

THE GROWING YEARS. By William Seaman Bainbridge, M. D. The H. H. Otis Book Co., Buffalo and Chautauqua, 1906.

A popular presentation of the author's views on heredity and the care of the young.

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